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The Wisconsin Archeologist

Vol. 3. January 1924 No. 1
NEW SERIES

PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE

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The Wisconsin Archeologist

Vol. 3 | January 1924 NEW SERIES | No. 1

STONE PESTLES AND MORTARS

PUBLISHED QUARTERLY BY THE
WISCONSIN ARCHEOLOGICAL SOCIETY
MILWAUKEE

Wisconsin Archeological Society

Milwaukee, Wis.

Incorporated March 23, 1903, for the purpose of advancing the study and preservation of Wisconsin antiquities.

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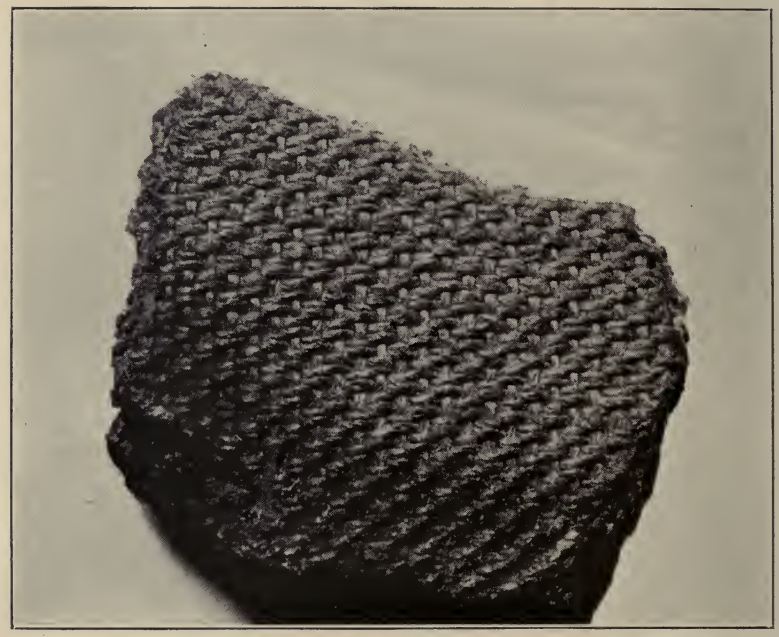

Fabric-marked Potsherd
Pepin, Wisconsin

(Three times enlarged)

The Wisconsin Archeologist

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STONE PESTLES AND MORTARS

Charles E. Brown

During an inspection trip of museums in the eastern United States, made during the summer of 1922, the writer became very much impressed with the large number and the extraordinary size and beauty of workmanship of many of the Indian stone pestles preserved in the archeological collections of some of these institutions. These specimens particularly appealed to his interest because of the comparatively small number and ordinary form of the stone pestles which have been recovered to date from archeological sites in Wisconsin. A brief statement concerning the character of some of the fine pestles seen in eastern museums and private collections must suffice.

In the collections of the fine museum of the Buffalo Historical Society, at Buffalo, there were seen, among others, a fine series of the long and heavy cylindrical and tapering stone pestles found in the state of New York. The largest of the tapering pestles, a finely shaped polished specimen, was 15 inches in length. The extensive archeological collections of the New York State Museum, at Albany, also contained a considerable number of fine examples of large, heavy and artistically fashioned pestles of both the tapering and cylindrical forms. A few specimens of the former had animal heads carved at the smaller extremity. Some of these and a number of mortars came from a Pre-Iroquoian site in the Genesee Valley. One very long, polished cylindrical pestle from this region was noticeable because of its unusually small diameter. Several other large stone pestles were labelled as coming from the Big Bend of the Hudson, in Warren county. One of these also had a carved animal head. Four exceptionally large pestles, designated as Algonkian, came from Green Is-

land. The largest of these tapered from the middle toward both ends, a most unusual shape. Its length was about 26 inches and its diameter at its middle about 3½ inches. There are in the museum also two unusually large pestles of the bell-shaped form. One of these, a beautiful artifact, in the Alvin H. Dewey collection, made of a hard black stone and highly polished, is 8 inches high and 6 inches in diameter at its base.

Mr. Arthur C. Parker, state archeologist, says of the pestles and mortars of the New York Indians:*

"The ordinary Algonkian pestle is cylindrical in form and long. The diameter varies from 1½ inches to 4 inches. A few are as short as 6 inches but the average form is approximately 14. Exceptional pestles have been found with lengths above 18 inches and ranging up to 24. Along the Hudson river from Catskill to Glens Falls, and along the Seneca river, pestles have been found with the effigies of animal heads at the upper or handle ends. In most cases the head bends at a slight angle. Along the Seneca river some pestles seem to be phallic. These may have been used as clubs.

"Stone mortars are not to be regarded as common, though one should not consider them rare. In proportion to the number of stone pestles, however, mortars are exceedingly scarce. Most of them are made from small boulders hollowed out, apparently, by a considerable expenditure of time and energy. The cavities vary from mere hollows to cups 3 to 5 inches deep. A few New York specimens are double faced."

The New York pestles are largely Algonkian, a few are said to have been found on Iroquois sites. Of the large stone pestles some are known to have been used in wooden mortars. The writer was not impressed with the stone mortars found in New York collections. Their number was small and they were but crude affairs.

In the American Museum of Natural History, New York, there were on exhibition a series of large stone pestles from Pennsylvania. These were similar in form to those found in New York. None were, however, of as large a size, as the larger specimens seen at Albany. There were here also some large stone pestles from Maine. The United States National Museum has in its great collections numerous large stone pestles from different parts of the eastern United States.

*The Archeo. Hist. of N. Y., 60.

Several of the largest were over 3 feet in length. In other museums in New York and Pennsylvania fine examples of these large and finely worked, and, sometimes, highly polished stone pestles were encountered. Some showed no indications of use and it is doubtful whether they were ever actually used as pestles.

In Ohio and Indiana, where stone pestles are numerous, the most common forms of pestle are the conical and bell-shaped. Those of the so-called "rolling-pin" form are said to be rare.* In a collection which the late William H. Ellsworth, of Milwaukee, once purchased in Ohio there were fifty or more of the common conical and bell-shaped pestles. These were so common in the locality where they were found that they were priced by their former owner at about 25 cents each.

Mr. Thomas A. Hendricks, of Indianapolis, whose archeological collection is one of the finest, if not the finest, in the state of Indiana, has collected a large number of bell-shaped and conical pestles in his state. These are found pretty well all over the state. Cylindrical pestles are rather rare. He has three in his collection. Of the bell-shaped pestles he has twenty-six selected examples, some of which are of very fine workmanship. These are from counties east and south of Indianapolis.

The conical and bell-shaped pestles also occur in Illinois but there appears to be no exact information now available concerning their abundance or distribution. The need of an active state archeological society in our sister state has long been apparent. Of the forms and numbers of stone pestles in Michigan we likewise lack information.

Pestles in Wisconsin

Stone pestles are not common in Wisconsin and stone mortars rather scarce. It is strange that more specimens of the former should not have been found on Algonkian sites in this state, this tribe of this great Indian stock being particularly noted makers of stone pestles. Many of the largest and finest stone pestles found in the eastern states are said to have come from sites formerly occupied by Algonkian tribes. On many Indian village sites in Wisconsin are found rudely shaped

*Archeo. Hist. of Ohio, 537.

stones which might well have been used and probably were used for the crushing of corn, acorns, seeds and other substances, but they might also have been equally well used for other domestic purposes.

The largest and finest pestle as yet found in Wisconsin was obtained in 1880 in Vernon county, Wisconsin, and was presented to the State Historical Museum by Mr. Henry Casson, Jr., of Madison. This specimen is of the long, tapering form, is 19¼ inches in length, 1¾ inches in diameter at its base, and weighs 3¼ pounds. Its surface is polished but is curiously eroded where softer parts of the stone have worn away.

Another tapering pestle, 9¾ inches in length and 1¾ inches in diameter at its base, comes from Burlington, Racine county. It is smooth with a slight polish and weighs 33 ounces. A third specimen, made of compact sandstone, 4½ inches in length and 1½ and 1¾ inches in diameter at its base, weighs 10 ounces. It comes from the same locality as the foregoing.

Mr. W. H. Vogel, a Milwaukee collector, has a large tapering stone pestle found in the Rock River, at Horicon, Wisconsin. A granite pestle which tapers toward both ends, comes from Dane county. It is 8½ inches in length, 2¼ inches in diameter and weighs 39 ounces.

A cylindrical pestle comes from Norway, Racine county. It is made of granite, is 6¾ inches long, 1¼ inches in diameter at its base and weighs 22 ounces. Another small cylindrical pestle was found at Kenosha. A third comes from Lafayette county. This pestle is made of a hard brown stone, slightly polished, and is peculiar in that it is irregularly square in section with both extremities slightly rounded. Its length is 10⅛ inches and its diameter at the ends 1⅛ and 2 inches. It weighs 2⅝ pounds. Another pestle of this form was found at Prairie Farm, Barron county. A small part of one extremity has been broken off. Its original length was about 8½ inches.

A pestle of the short, conical form was found at Albany, Wisconsin. It is made of a light grey quartzite and is 4 inches high and its base 3 inches in diameter. It weighs 1¼ pounds. The base is uneven, being worn off more on one side than the other. A bell-shaped pestle, made of syenite, comes from Durand, Pepin county. It is in the Dr. W. H. Bailey collection.

The Milwaukee Public Museum also has a small number of stone pestles of these forms, and a few, nearly all of them rather crude specimens, are in other Wisconsin public and private collections.

Stone Mortars

The number of stone mortars found in Wisconsin is smaller than the number of stone pestles which have been recovered. These mortars are stones of small or quite large sizes, flat or somewhat spherical in shape, with shallow saucer or bowl-shaped depressions worked into one surface. Most are rude affairs, little or no attention having been given to shaping the exterior of the stone. An exception to this rule is a small, finely shaped globular mortar in the A. and J. Gerend collection and which comes from near Dundee, Fond du Lac county. An ordinary cobblestone mortar, hollowed out on one surface, now in the Logan Museum, at Beloit, was found on the West farm, near Caledonia, Racine county. A small number of others of the same character are in the Milwaukee Public Museum and in private collections. Several others, found in southern and central Wisconsin counties, consist of irregular slabs of compact sandstone or other rock with a shallow circular or oval concavity on one flat surface. Some years ago a large and heavy rude boulder mortar was found by Mr. E. H. Burnham and the writer on the bank of the Chippewa River, a short distance above Holcombe, in Chippewa county.

Benjamin G. Armstrong in his Reminiscences of his life among the Lake Superior Chippewa Indians in Wisconsin (1837–54) speaks of the use of stone vessels for the cooling and graining of maple sugar: "The rock bowls are made as follows: Securing a sandstone as near flat as possible and from 20 to 30 inches square, the hollowing process is begun by taking a stone or boulder harder than the bowl stone, and as pointed as they could find. They would commence and continue the picking process until the stone has been crumbled away to a proper depth and circumference, then it was rubbed with a stone with sand and water until the inner surface was perfectly smooth and polished. It was a long and tedious undertaking, but when one was completed it was highly prized, and they were heirlooms for many generations."

The small stones occasionally seen in private collections having one or several small, circular depressions and spoken of as "paint mortars" are for the most part but stones from which soft parts have been eroded by natural agencies. Few, if any, of them show any indications of human use.

Corn Mills

Of the large stationary boulder mortars known as "corn mills" a small number have been found to exist on or near former Wisconsin Indian camp or village sites. One of these is preserved on the Lake Winnebago shore, in front of the Doty log cabin on the John Strange place, at Menasha. It has on its upper surface two highly polished basin-shaped depressions in which the women of this former Winnebago village site ground their corn. The stone itself is a trap boulder, oval in form, about 6 feet in length, 3 feet high and 3 feet in thickness. The late Wisconsin archeologist, Publius V. Lawson, who originally described this stone, describes another corn mill which is situated in Black Wolf township, south of Oshkosh, in Winnebago county. "This huge granite boulder, the largest glacial rock in the county, is located on the property of Mr. Adolph Freiberg (Section 33), at the waters edge [of Lake Winnebago] on the shore of Long Point bay. It is a prominent landmark in a district where there are no other large boulders. It is rather angular in shape and measures 8 feet across the top. It stands 5 feet above the ground and extends at least as many feet below the surface. On its top are two seemingly artificially excavated basins or depressions, each about 3 inches in depth and highly polished, which were used as "corn mills" by the aborigines of the neighborhood."* This also is a site known to have been formerly occupied by the Winnebago.

It is now surrounded by water, due to the raising of the waters of the lake, and is approachable only by boat. One of the depressions on its top is much deeper than the other.

A third boulder mortar was formerly in place on the west bank of the Fox River, at a distance of about one-fourth mile south of the Green Bay railroad bridge, directly across the river from the St. Joseph's Orphan Asylum. The writers' at-

*2 & 3 Wis. Archeo., 56, 57.

tention was first directed to this aboriginal landmark by Mr. John P. Schumacher, of Green Bay, with whom he visited it some years ago. The stone, according to Prof. Samuel Weidman, the geologist, is an igneous rock, the minerals in it being largely felspar and pyroxene. It measures about 6 feet through and stood 5 feet above ground. On its top are two shallow, highly polished depressions of about the size and depth of an ordinary dinner plate. One is not as regular as the other and is elliptical in form. This mill has since been removed to the public library grounds at Green Bay.

Another corn mill stone is located on a former Winnebago camp site on the northeast shore of Lake Monona, at Madison. This large granite rock has a single, smooth saucer-shaped cavity on its top. According to information given to the writer by the late Mr. Ezra H. Stiles, a former resident of the region, another large stationary mortar was in former years located on the Crawfish River bank, in front of the Indian earthwork enclosure at Aztalan. It has long since disappeared from its former station, being either rolled into the river or otherwise disposed of.

Wooden Pestles and Mortars

The Wisconsin tribes have long used both upright cylindrical and horizontal wooden mortars. The Winnebago appear to have preferred the horizontal type. These, in recent years, have been made from small sections of logs from one foot to 18 inches or more in length and have a small square or rectangular cavity 3 to 5 inches deep chopped out at the center. At one end is hewn a projection or handle, by means of which it can be lifted or carried. The wooden, double-end pestle is from 2 to 3 feet long. Similar mortars are used by the Wisconsin Menomini. These have a rude handle hewn at both ends.*

The Potawatomi and Chippewa had upright cylindrical mortars made of sections of logs, the cavity being burned and scraped out. The Potawatomi of an early village near Mishicott, Manitowoc county, used mortars for the grinding of their corn which were hewn in the trunks of large fallen trees.

*See Mat. Culture of the Menomini, 303–04.

CAVES AND ROCK SHELTERS OF FRANCE

Alonzo W. Pond

It was the writer's privilege to be a student of the American School in France for prehistoric study during its first season, 1921-1922. The summer months were spent in excavating at some of the well known prehistoric stations and in visiting all those stations in France which have produced anything of archeological interest. Since that first year the summer trip has been enlarged so that all the important points of archeological interest in France, England, Switzerland, Germany, Denmark, Holland, Belgium and Spain are now visited. The school is open to all who are interested in prehistoric archeology and as no tuition is charged anyone who is planning a summer in Europe will do well to join the school for a part or all of the trip. Communications should be addressed either to Dr. Charles Peabody, Harvard University, Cambridge, Mass., or Dr. Geo. G. MacCurdy, Yale University, New Haven, Conn.

To those familiar with archeological research in America, the work in Europe will present many differences. In the first place, America has as yet produced nothing which can be considered older than neolithic or new stone age, while the cultures of Europe extend back through the paleolithic to the questionable culture called eolithic. Those who are trained in America usually have some difficulty in believing in the authenticity of the flint implements of the early old stone age as the work is so very crude. However, that early doubt disappears after one has dug up a few such pieces from deposits containing the bones of extinct mammoths, saber toothed tigers and the like.

In Europe the majority of archeological discoveries are made in deposits in caves or rock shelters or in the talus slopes below such shelters. Occasionally these deposits contain the cultures of only one prehistoric period, but more often they disclose from two to eight or more distinct layers representing the cultures of two, three and even five or six different stages in the evolution of man. Under such conditions the archeologist's work is not spread over such a large territory as in American Indian village sites for example. Once a

student has found a cave that has been inhabited by prehistoric man he can confine his labors to that small area for anywhere from a week to several years. At the station of La Quina, for example, Dr. Martin has been digging in a plot not over one hundred fifty feet long, fifty feet wide and fifteen feet thick for fifteen years. In that time he has filled a small museum with the culture of the Mousterian or Neanderthal race and has discovered two Neanderthal skulls, besides other parts of the skeleton and the remains of several long extinct animals.

Most of the caves or deposits in France which have proved to be of archeological importance have been taken over by the government and are looked after by a branch of the department of education. Each of the larger stations (any deposit which has been or is being studied archeologically is called a station or diggings) has some one who is interested in the subject in charge. He is given a small stipend by the government and the material which he finds is placed in a museum at or near the station. The museum belongs to the government, the same as the stations.

Often a collector will prefer to keep the property rights in his cave or diggings and as long as he does not permit any exceptionally unique finds to be sent out of the country that is allowed. For instance, the cave of Tuc d' Auber in which are the two clay bisons of late old stone age is still the property of the discoverer, Count Begouen. He will, in time, turn it over to the government but he does not care to do so at present, because his excavations are not anywhere near completed and if turned into government station it would have to be made available to all tourists. Those who have seen the destruction in other caves where tourists are admitted will understand Count Begouen's desire to keep beautiful Tuc d'Auber from a similar fate. It is always available to archeological students, however, and such will find the Count and his sons the most charming hosts and guides.

At Les Eyzies a cave was discovered in which a large fish was deeply engraved on the ceiling. It was a remarkable piece of art and greatly desired by German archeologists. They finally succeeded in buying it from the owner of the cave, a peasant not interested in archeology. Immediately they set to work to remove a block of stone from the cave roof which would contain the fish engraving. They had the work

well under way when it was brought to the attention of the French government. They at once refused to allow the treasure to leave France and paid the peasant owner the same price he was to receive from the Germans. The cave is now government property and anyone who cares to see the fish may do so by obtaining the key to the cave from the director of the district.

A similar arrangement is carried out in regards to historical monuments as chateaux. The owners in this instance are not allowed to alter the buildings and are granted a certain sum by the government for restoration and necessary repairs. While each monument, or cave, may have its special director or guardian all those in a certain district report to a district head who in turn makes an annual report to the government. In this way historical and archeological monuments are preserved to posterity.

So much material has been discovered by the prehistoric archeologists of Europe that some sort of classification and a system of nomenclature is necessary to make it available for study. I realize that classifications and names are always a fine source for scientific argument. Something is always slipping over onto the next fellows lawn and giving rather convincing proof that it really is as much his place as his neighbors anyway. Recognizing that fact I shall not waste time arguing over the relative merits of the different classifications but shall adopt that used by the French as it is the more general.

That period of the earth's history in which the evidence of a culture produced by a being of more than animal intelligence is indisputable is divided into two main periods, paleolithic or old stone age and neolithic or new stone age. There are two or three divisions recognized in the neolithic period of Europe, but this article will treat only the paleolithic.

The paleolithic epoch is divided into six smaller periods, the names of which are taken from the stations having produced the most typical cultures of those periods. These represent two distinct lines of evolution. The older group of three periods was produced by a being which is not the direct ancestor of the present human race. Although the term man is applied to the producer of these ancient cultures there are several strong arguments in favor of calling him an intelli-

Les Eyzies

Capital of the Prehistoric World
Museum in restored chateau half way up the cliff on right

Haute Roche

Near Angouleme (Charente)
All digging is not easy, for many rocks have to be removed

gent ape. In short, it is not certainly known whether on the human ancestral tree this race is a branch from the apes running parallel to the human or main trunk or whether it is a shoot from the common ancestor, branching off a little higher up than the apes. In the former case he would be called a man-like ape; in the latter an ape-like man. These three periods are Chelleen, Acheuleen and Mousterien and are represented in skeletal remains by Trinal man, Heidelberg man and Neanderthal man. It is probably giving Trinal man more than his share of credit to say that he produced Chelleen culture as the evidence is that his intelligence was not equal to the task. If he is responsible for any stone culture it is more likely that of the questionable eolithes than that of the well defined Chelleen period.

These skeletal remains represent three distinct steps in evolution but they are fundamentally different from those of modern men so that they are not considered as our direct ancestors.

The Chelleen culture is characterized by large heavy coups de poing or as one American writer translates the term "fist hatchets." These are more or less triangular flint hatchets. The flaking is apparently all done by percussion blows from a hammer stone as the flake scars are large and coarse. During the next or Acheuleen period the implements show somewhat more regularity of form. There are one or two smaller shapes and the "fist axes" are not quite as coarse nor as heavy. In the third period known as the Mousterien the heavy forms disappear altogether. The typical tools are a small ovoid scraper and a knife. They are usually large flakes perfectly smooth on one side where they were broken away from the core and re-chipped* on the other. The edges are retouched by a bone crushing tool which is also found in the deposits of this period.

The second group of cultures was produced by the direct ancestors of modern man. There are no fundamental differences between modern skeletons and those found in the deposits of these later old stone age periods. The technique of working stone is distinctly different in these last three pe-

* This has just been proven completely in error by Mr. H. L. Skavlem and it is the writer's intention to gather further material on this point in the coming summer's trip in these fields.

riods from that of the preceding group and there is a recognizable progress in the work of both bone and stone. It is probable that this new race developed in the east and migrated to what is now western Europe. Other than the fact that the men of this later group may have co-existed in Europe with those of the Mousterien period there was no connection between the two. It appears that the older line was not able to hold out in the struggle for existence and died off rather than that it was conquered by the more advanced race. If it had been conquered, its physical traits would have been mingled with those of later generations and traces of its culture would be recognizable in later periods which is not the case.

Aurignacien is the name given to the oldest period of this new line. The flint culture is characterzied by long narrow blades. Knives and points are retouched on one edge and the point. Scrapers are retouched all around. Bone is used for spear and arrow points, needles, awls and pins. They are all very simple and without decoration. Teeth, shells and bits of bone were pierced for ornamentation. The cave walls of this period are decorated with drawings and carvings and there are a few good examples of sculpture.

The Solutrien period which succeeds the Aurignacien continued the use of bone but did not greatly improve the character of its working except in the production of a very fine needle with an eye. Flint work, however, reached the pinnacle of perfection at this time. Long, graceful "willow leaf" blades are quite common; slender spear and arrow points with a notched base and a delicate little graver are all chipped with a skill superior to that of any later periods. It is not uncommon to see large flint knives so thin that light easily passes through them, and the skill with which the aborigine controlled concoidal fracture is only equaled by that of our own H. L. Skavlem. The art of this period seems to be rare, but probably it is because of the difficulty of accurately dating the more primitive drawings. A simple outline drawing of a bison found in a cave near Les Eyzies, Dordogne, is credited to the Solutrien however.

The last of the paleolithic periods is the Magdalenien. Flint working declined greatly. There are some long, slender

flakes and sharp gravers but they seem to have been used with the minimum of retouching. The work in bone on the other hand reached that pinnacle held by flint work in the preceding epoch. There are all manner of spear points, awls, needles, pins and harpoon points. The latter present an interesting study. In the early part of the period we find a rather simple form with a few barbs on one side only. The barbs gradually increase in number on the one side until we find one or two added to the opposite side. These are likewise increased while those on the first side are reduced until they are about equal in number on both sides.

There are a great many ornamental and decorative bone pieces and bits of ivory or antler. A great part of the excellent drawings and paintings on the cave walls is ascribed to this Magdalenien period as are the famous life size sculptured horses in the cave of Cap-Blanc and the clay models of Bisons in the cave Tuc d' Auber.

Perhaps a description of one or two of those caves we visited will be of interest. At a little mountain village called Cabaretts we were entertained by the local priest who is an ardent student of archeology.

After the most excellent dinner we had had in France we drove over to a cavern known to the peasants as St. Eulalie's cave. Its principal treasure is the drawing of a reindeer. At one end of the cave there is a great pit. Huge pinnacles extend up from its unseen depths. "I'm sure it is the entrance to Hell," said Miss Crockett, a member of our party, as we looked down into it. "I can fairly hear the Devil calling me."

"It is true, Madamoiselle," said M. Peyrony, "but you know I am an especial friend of monsieur, the devil, and I have told him not to insist on your descent."

There are two levels to this cave of St. Eulalie and our guide, the priest, explained that on the lower level is a pool of water which the peasants have for years superstitiously worshipped. According to their belief any child who falls ill with certain sicknesses can be cured at once by the spirits of this underground spring. The child is taken into the dark cavern, all his clothing removed and his whole body immersed in the cold waters. The clothes are left as an offering to the spirits. At the time this priest first visited the cavern in 1920

there were several garments lying by the water. Even in this twentieth century there are lingerings of the religion of the ancient cave men.

Down in the Pyrenees Mountains

I was so impressed by the cave of Tuc d' Auber that on coming out I wrote a detailed description which I give here in full.

A ten minute walk from Les Espaces brought us to a tiny creek which rippled out of a large hole in the mountain. A small boat lay on the bank which we easily launched. We lost no time in lighting our torches. With a piece of board for a paddle we forced the little boat up stream to the mouth of the cavern and disappeared into the mountain. The air at once became colder; we felt the need of more than summer clothing. For a little ways the sunlight aided us. We could see the great high walls of gray rock almost to the top of the cave, then the little stream turned sharply to the left. Cautiously we swung the boat around a huge block of limestone and found ourselves in total blackness. The change was so sudden that it gave us a distinct shock. But a moment before we had been in a sort of twilight, now the darkness was more intense than that of the blackest night in the deep forest. Our tiny torches seemed only to emphasize the darkness as they cast weird lights and shadows on the water. It was our first journey on a subterranean river. The thick, dark waters seemed outside the pale of natural things. The darkness, the strange lights and shadows made by the torches, the huge walls pressing so close to our tiny boat, the hushed loudness of the splashing paddle, all made the place awful, fearful, almost terrible. At length we reached a sort of beach of glistening white. Here we pulled the boat out and wandered on afoot. Through rooms as vast as cathedrals, with naves and choir lofts and altars all in alabaster. Into diamonded halls hung with great masses of glistening icicles. We mounted steep rocks, squeezed through narrow hallways, wiggled through low tunnels into other great rooms soundless and dim. Suddenly the beauty stopped.

Before us, a low-roofed, clay walled corridor silent and strange. This, too, had an end, and there on the floor, propped

up against a block that had fallen from the roof were two bisons modelled in clay.**

The figures were not large, only about two feet long, but exquisitely modeled. The head of the foremost, the female, was fairly breathing with life. The body and hump of the other showed all the energy of nature.

As we sat down before those figures—worshipful—our small torches piercing the primeval darkness—we could see the finger marks of the artist just as they were when he left his work—when? Perhaps an hour ago? But rather ten thousand years. We sat staring at those figures in the dim light. Whose were they? By what process of earth chemistry had they been preserved? Centuries ago, yes, tens and tens of centuries ago man had made his way into this remote corner of this awful cavern. It was too far from the entrance, nearly a mile, too far to have been his dwelling, and as we sat there we began to realize that we sat before a sacred altar. That exquisite clay modeling was the product of nothing less fine than devout worship. Here had the cave man of ages past come to worship, to pray to his God, a god of the chase. Here had be made an altar in the likeness of his God and here he must have come when game was scarce, when his wife and children were in need of food and clothing. His God rewarded him, his prayers were answered, enough game was provided for his needs, for his descendants have persisted even to the present time and in this part of France scientists have discovered people with the same physical characteristics as these men of the Magdalenian period. And a little farther into the mountains are people who still speak their language, for science has no other explanation for the origin of the Basque tongue.

A PREHISTORIC COLOMBIAN CITY

The archeological expedition sent out by the Field Museum, Chicago, has discovered the ruins of an extensive city in South America. They are located in the Colombian province of Magdalena, 40 miles from the Caribbean sea and 20 miles south of Santa Maria. Dr. J. A. Mason, leading the Chicago

** See cut of these on page 430, "Men of the Old Stone Age," by H. F. Osborne.

expedition, says that the region is mountainous and practically uninhabited. He is of the opinion that this ancient city was once one of the centers of the world's population. Now even its name is unknown to history and science.

Dr. Mason reports that large areas are covered with house sites and other indications of a crude civilization which has been blotted from the pages of existence. The houses were made of wood and built on terraces with retaining walls. The entering steps are of beautifully cut stone and where the foot path is far below, the terrace is connected with steps all the way down. Near the site of many of the houses may be seen a large slab of stone on which the inhabitants ground their corn. Fragments of pottery suggest the degree of their advancement. A few of the fragments of pottery are beautifully ornamented but most of them are plain. Many valuable and beautiful figures of gold and ornaments of shell, carnelian and agate were also found.

Dr. Mason had been informed of an Indian road through the mountains. To his great surprise he found dozens of these roads. They are paved with flat water-worn rocks of similar size and appearance. The smaller trails consist of a single file of these slabs while the regular roads and streets are four or five feet wide and edged with upright stones. Wherever the roads pass over a declivity the stones are set in like steps in a stairway. Some of the members of the expedition think that the ruins resemble a collection of villages rather than a single city. When this ancient city flourished, who its inhabitants were and how it was destroyed can at present be matters only of conjecture.

CLOTH WEAVING OF THE DAKOTA

Specimens of woven cloth made by the early Indians of Wisconsin and Minnesota are few in number. Narrow cloth strips woven for war bundles, or medicine bags was usually of very coarse fibre or bark threads, sometimes of buffalo hair.

Some imprints of cloth fabrics are found on potsherds. A sample is shown in the frontispiece of this issue of the Wisconsin Archeologist.

This fragment of pottery I had the pleasure of finding on a site about one-half mile below the town of Pepin, in Pepin

county, Wisconsin, on the top of a sand bank 50 feet above the water's of Lake Pepin at low stage, and about 100 feet back from its edge.

At this place south winds moved the sand about, at times uncovering specimens of pottery, arrow heads, an occasional bead or small piece of beaten copper.

The potsherd illustrated is about one inch square, the photograph enlarges it three times, the better to show the detail of the weave. This is the only fabric-ornamented potsherd known to the writer which shows the texture of cloth made by the Dakota.

The fabric is shown to be of a very simple structure, the straight single-thread warp being crossed by a woof of double thread, the threads of the warp running alternately over and under the woof.

There is no evidence of the twisting of either, but there is a uniformity of size which indicates the use of some long strands of bast.

The double-thread woof sometimes has one thread notably smaller than the other, but most of the threads are of about the same size.

This specimen of cloth weave was illustrated by Mr. Bower in Vol. XI, page 55, of the Collections of the Minnesota Historical Society, 1904, and also mentioned in the publication, "Aborigines of Minnesota," 1906–1911, Minnesota Historical Society, by N. H. Winchell.

At the time Professor Winchell examined this specimen he made a replica in wax which is a very good copy, also gave to the writer in return six wax impressions of fabric marked potsherds found at Bay City, Wisconsin.

The writer has two Mandan potsherds with cloth imprints. Those fabrics are of a coarser texture than the Pepin specimen, which is notable because of the fineness of the threads and uniformity of the weave.

Note—The Cedar Grove, Lake Michigan shore site, in Ozaukee county, has yielded some potsherds marked with impressions of a coarse netted fabric.

USES OF NATIVE PLANTS BY THE MENOMINI

In his monograph on the "Ethnobotany of the Menomini Indians,"* Mr. Huron H. Smith has made an important contribution to both local ethnological and botanical literature. This report, he states, is the result of four field trips, each of three weeks' duration, made to the Menomini Indian reservation in Shawano county, Wisconsin, during the years 1921 and 1922. These visits, made during four different periods of the year, "were necessary because the Indian usually does not recognize the species he uses, at all seasons of the year, any more than most white men recognize plants when they are not in bloom." He makes the statement that in modern agriculture the Menomini are well in advance of the average Indian tribe. "While the Menomini are known as a progressive tribe in agriculture, there are yet a goodly number of pagans among them, who cling to the rites and customs of the tribe, and who are, therefore, well versed in aboriginal uses of plants for foods, textiles, medicines and various other uses."

Because of the sanctity of most of their medicinal knowledge, it is difficult to obtain full information on the uses of plants as medicines. The first trip one makes to the reservation will result in the gathering of a host of medicinal plants, and a feeling that he now has something to give to the scientific world. The second trip will discover that there is much more than he supposed on the first trip, while remaining trips will convince him that no white man will ever get all the data, names and uses of plants from the Menomini. To complete the list, one would need the cooperation of every old pagan man and woman on the reservation, for they all have different things handed down to them by word of mouth from their parents. Since many of their uses of the various plants are revealed to the medicine men in their dreams, which form the diagnostic part of the treatment, it is quite evident that there are remedies known only to particular medicine men and not to any of the rest of the tribe."

"To acquire a complete list of all their medicines would require several years of intimate life with the Indians throughout the entire growing season."

*Bull., Mil. Pub. Mus. V. 4, No. 1, 1923.

The author enumerates 120 plants which the Menomini employ for medicinal purposes. Forty-five plants are used as food, eight to obtain dyes and seventeen for use in tanning, love-charms, sacred or ceremonial and for other purposes. He found within the limits of the reservation 148 or more plants of which these Indians, so far as he could learn, made no medicinal uses. Some seventeen, or more, of these are plants now or were formerly employed by the white man, for medicinal purposes.

Among the plants regarded by the Indians as valuable or important medicinal plants are staghorn sumach, skunk cabbage, sweet flag, spikenard, wild ginger, butterfly weed, blue cohosh, hoary alder, common elderberry, yarrow, Canada wormwood, boneset, sneezeweed, sweet coltsfoot, alternate-leaved dogwood, shepherd's purse, Virginia pepper grass, balsam apple, prince's pine, wintergreen, wild cranesbill, witch hazel, great St. John's wort, butternut, wild mint, peppermint, wild bergamot, catnip, large-flowered trillium, sweet fern, yellow water lily, black ash, great willow herb, yellow ladies' slipper, balsam fir, tamarack, white spruce, jack pine, white pine, arbor-vitae, hemlock, Rugel's plantain, Pennsylvania persicaria, maidenhair fern, ostrich fern, brake, gold thread, liverleaf, New Jersey tea, ninebark, choke cherry, blackberry, partridge berry, prickly ash, balm of Gilead, dwarf willow, rough heuchara, swamp saxifrage, sessile paintbrush, great mullen, Culver's root, ground hemlock, leatherwood, angelica, yellow pimpernel, slippery elm, edible valerian, swamp valerian and blue vervain.

Mr. Smith states that for all medicines the method of procedure is much the same. "The diagnosis of the ailment is the first step. The medicine man or woman comes to see the patient and finds out where the pain is located, and how it was brought about. Then he goes home and at night he dreams about the case. A spirit tells him what is the matter, how it may be cured, and what herbs are needed. Oftentimes the medicine man, or one initiated in medicine practices, will visit a spirit rock and leave his votive offering on the rock with the prayer for light on some disease.

"After the diagnostic dream, the medicine man or woman goes to gather the herbs. When he finds the proper plant he starts to chant a song, telling Grandmother Earth why he has chosen

this root or herb and how he intends to use it, at the same time asking that she lend her power to the medicine that it may heal." He then sings a song. "Then he plucks or digs the plant from Grandmother Earth's bosom, or pulls the hairs from her head, as some have it. In the cavity, he places as a gift to Grandmother Earth a little portion of tobacco. When he has brought the ingredients together, he takes or sends them to the patient with proper directions for their use.

"Some of the principal native plants used by the Menomini for food are lichens, arum-leaved arrowhead, swamp milkweed, dandelion, large tooth cress, wild rice, Virginia waterleaf, groundnut, cranberry bean, wild leek, wild onion, yellow water lily, marsh marigold and Indian potato.

"Menomini fiber plants are the dogbane, common milkweed, cedar, butternut, basswood and slender nettle.

"Vegetal dyes are obtained from the staghorn sumac (yellow), spotted touch-me-not (orange yellow), speckled alder (reddish or brown), butternut (black and brown), ladies' sorrel (yellow), bloodroot (red or orange red), hemlock (dark red) and hooked crowfoot (red). The Menomini have forgotten how some of their dye colors were obtained. "Green was said to have been a vegetable dye, but there are none among the Menomini that now know the source of it. The present day Menomini still depends on the native vegetal dyes to a large extent for his red, yellow and black colors. Other colors are supplied by the white man."

Mr. Smith has also undertaken investigations of the ethnobotany of the Wisconsin Chippewa and of the Fox Indians.

THE MICHIGAN STATE ARCHEOLOGICAL SOCIETY

On January 17th the Michigan State Archeological Society was launched at a meeting of Michigan archeologists held at the state office and library building, at Lansing. Fifty-one persons became charter members. Immediate steps to map and preserve state antiquities will be taken. It was decided to hold annually a business meeting in Lansing and two program meetings in other cities. Dr. George N. Fuller, secretary of the Michigan Historical Commission, promised full cooperation with the new state organization. Officers were

elected as follows: President, George R. Fox, director, the Edward K. Warren Foundation, Three Oaks; vice president, Professor R. Clyde Ford, Ypsilanti Normal School; secretary and treasurer, Edward J. Stevens, Kalamazoo. Directors: Alvah L. Sawyer, Menominee; Dr. W. B. Hinsdale, curator, University of Michigan museum, Ann Arbor. The following were named members of a committee to organize an archeological survey of the state: George R. Fox, chairman; R. Clyde Ford, Edward J. Stevens, Alvah L. Sawyer, Dr. W. B. Hinsdale, Dr. George N. Fuller and William W. Potter, chairman of the public utilities commission, Lansing; Fred Dustin, Saginaw; Dr. William Durand, Marshall.

The following committee chairmen were appointed: Public and private collections, Charles E. Morrison, Williamston; membership, Edward J. Stevens; publicity and bibliography, Charles A. Weissert, Kalamazoo; folklore, R. Clyde Ford, Ypsilanti.

Edward J. Stevens, Kalamazoo, who, with Dr. W. B. Hinsdale, was one of the promoters of the society, reported that archeological maps locating the Indian trails, village sites and mounds were being made in Kalamazoo, Berrien, Cass, Van Buren, Saginaw, Wexford, Ogemaw and Missaukee counties.

A constitution and by-laws were adopted. The society has five classes of membership—life, sustaining, annual, junior and honorary. Honorary membership may be conferred upon persons who have made or may make distinguished contributions to Michigan archeology. Any member of the Indian race, a resident of the state, may become an honorary member. The next meeting of the society will be held at Ann Arbor, on March 29th.

The Wisconsin Archeological Society extends to the newly organized society its best wishes for the success of all of its undertakings. It is with pleasure that we note among its officers the names of Mr. George R. Fox and Dr. W. B. Hinsdale and of others well known for their active interest in the preservation of Indian archeological history, and under whose guidance it cannot fail to carry out its aims and deserve the gratitude of the people of Michigan. May we not look forward to the organization in the near future of similar state societies in Indiana, Illinois, Iowa and Minnesota.

CONFERENCE ON STATE ARCHEOLOGICAL SURVEYS

A conference on state archeological surveys was conducted by the committee on state archeological surveys of the division of Anthropology and Psychology of the National Research Council at a general meeting of Section 4 of the American Association for the Advancement of Science, held at Cincinnati, on Monday, December 31, 1923. It was fairly well attended.

The program, which consisted of a discussion of the following topics, was carried out as scheduled:

1. State archeological maps.
2. The state park question.
3. The laws for the protection of antiquities and their relation to the encouragement of archeological research.
4. The state society or full state control.
5. The coordination of a state geological and archeological survey.
6. The relation of historical societies to the archeological surveys.

The following states were represented: Ohio, Indiana, Iowa, Michigan, Minnesota, Kentucky, Missouri, Tennessee, Alabama, Mississippi and the New England states. Mr. Charles E. Brown, of Wisconsin, who had been invited to lead in the discussion of topic 4, being unable to be present because of serious illness in his home, submitted a written discussion. Mr. Harlow Lindley, of Indiana, was also prevented by illness from participating in the meeting, his topic being discussed by Dr. Amos W. Butler.

The entire session was given to the consideration of problems in administration, organization and technique of state surveys. Prof. Charles R. Keyes, of Iowa, presented advance copies of the committee's pamphlet on state surveys.

The consensus of opinion was that the cooperation of state geological departments was highly desirable since these departments were especially equipped to accurately map and record distribution data.

On the other hand, however, it was considered essential that those interested in archeological research within the state be organized either under the auspices of a historical society or

as a state archeological society to the end that their interest be sustained and that they might in that way insure the continuation of the survey project. Whether this report came from an archeological society, historical society, or directly from the state was relatively unimportant.

The great desirability of the establishment of state archeological parks and their maintenance was unanimously agreed to, but the policy pursued by the state of Ohio was recommended, namely that these parks be made, as far as possible, self-sustaining, that is the custodians of the parks be farmers privileged to reside in the park and to till all of the agricultural land in so far as this was not detrimental to the archeological features in the park. By this policy Ohio has made practically all of its parks self-supporting.

Finally, the conference recommended that the major attention be given to a comprehensive survey of the state showing in detail the distribution of the different types of archeological remains and that, in order to make the maps of states interchangeable, a system of symbols be adopted, but that in order to reach a satisfactory standard this subject be given further consideration by the committee. It should also be understood that these symbols are to be used upon detailed locality maps and not upon general state maps.

Francis H. Lyman

Francis H. Lyman, of Kenosha, died at his winter home at Georgiana, Florida, on Friday, February 8th.

The announcement of his death will bring sorrow to all of the older members of the Wisconsin Archeological Society, of which he was a charter member, and in whose service he has always been active and deeply interested.

Francis Henry Lyman was born in Goshen, Mass., June 26, 1845. He came to Kenosha when three months old and had been a resident of Kenosha since that time. He graduated from the Kenosha high school with the class of 1863. He entered the University of Michigan at Ann Arbor but when Lincoln called for volunteers he left the university and entered the army, being a member of the 39th Wisconsin Regiment. On

his return from service, he re-entered the university, graduating in 1868 with degree of B.A.

Few residents of Kenosha county were more widely known or respected than Mr. Lyman. He was a member of the Grand Army, the State Historical Society and the Sons of the Revolution.

Many of the older residents of Kenosha joined in tribute to his memory when his remains were borne to their last resting place at Kenosha. Among the veterans of Fred S. Lovell Post of the Grand Army these tributes were tearful tributes. Mr. Lyman's great interest in the Grand Army and his deep solicitude for every man who had served under the flag, made him a great favorite with the men who served, no matter in what year they gave their service.

The last important public spirited act of Mr. Lyman's life was his gift of his fine collection of Indian archeological materials and his collections of pioneer and Civil War specimens to his home county. These he gleaned from various sources during many years of interested collecting. They are to be preserved to the public in cases to be erected in the new county court house which is now nearing completion. He could have left behind him no more lasting memorial to himself.

In former years it was the custom of the Milwaukee members of the Wisconsin Archeological Society to go occasionally to Kenosha to spend a day in rambling over the extensive local lake shore Indian sites with Mr. Lyman. From these sites, now largely occupied by dwellings and streets, he had personally collected many of the interesting archeological specimens which he possessed. It was a rare pleasure to be with him on these occasions.

"Francis Lyman may not have been overly rich in the sordid gold which many men seek but he was rich in human friendships and these friendships were not all one way friendships. He will be remembered in Kenosha as a man who was thoughtful of his country; thoughtful of his home town's traditions; thoughtful of the men who made those traditions more glorious; thoughtful of his friends and his family, and always to show that thoughtfulness in an intelligent and helpful manner.

"It is to be regretted that his nature—always shrinking from public praise—did not lead him to make even more de-

tailed records of the interesting history which he has collected. His splendid collection of relics of the other days will become a part of the county's most treasured holdings and a century from now other men who have built up a greater Kenosha city and county will revere him for his thoughtfulness in preserving for them that earliest history of their own state and county."—Kenosha Evening News.

It is as hard to lose from the ranks of the Wisconsin Archeological Society our loyal friend Francis H. Lyman as it was in recent years to part with such other devoted friends as Publius V. Lawson, William H. Ellsworth, Henry P. Hamilton, Dr. Lewis Sherman, David I. Bushnell, Senator Robert Glenn, Prof. Julius I. Torney, Dr. Louis Lotz, Miss Julia A. Lapham, E. H. Stiles and James G. Pickett, nearly all of whom, like him, have left behind them public monuments of their deep interest in the preservation of Wisconsin Indian remains and records.

THE WISCONSIN ARCHEOLOGICAL SURVEY, 1923

Although many parts of Wisconsin have been quite carefully examined in recent years by its investigators and field expeditions the Wisconsin Archeological Society reports the location during the year of fifteen unrecorded mound groups and solitary Indian earthworks, a total of 160 mounds in all. One of the finest of these, located in a pretty woodland on the shore of Ross lake, in Wood county, consists of forty conical, linear and effigy mounds. Most of the other mounds which the society has charted this year are situated in the Mud lake region in Dodge county, the Grand and Fox river country in Green Lake county, and the Wisconsin River region in Columbia county. A few of these mounds have been explored with interesting results in stone implements and earthenware.

The state society also reports the location of fifty former Indian camp and village sites, five additional planting grounds, eight cemeteries and a number of other burial places and the discovery of three caches or hidden deposits of flint implements and one of ten large sea shells. Other discoveries consist of another Indian spirit stone (in Jackson county), a rock bearing Indian pictographs and several lodge circles and trading post sites.

Although the society has been sadly handicapped in its survey and exploration work by the failure of the last legislature to provide additional funds its officers are well pleased with what was accomplished in 1923. In addition to the counties mentioned a smaller amount of work has been conducted in parts of Dane, Jackson, Jefferson, Waupaca, Walworth, and Kenosha counties. A report on the Indian history and remains in Waukesha county was printed and circulated during the year. This appeared in two parts and has already come into use, especially in the schools and libraries of Waukesha and adjoining counties.

Among the members of the society who have assisted in fieldwork during the past year are H. E. Cole, Baraboo; E. A. Gilman, Portage; W. C. English, Wyocena; T. L. Miller, Fairwater; Dr. F. C. Rogers, Oconomowoc; Rev. F. S. Dayton, New London; Dr. A. Gerend, Milladore; Dr. A. R. Wittman, Merrill; S. W. Faville and R. P. Ferry, Lake Mills, and Anton Sohrweide, Jr., Watertown. All defrayed their own expenses. The Messrs. George Overton, Butte des Morts, and A. P. Kannenberg, Oshkosh, members of its Winnebago county auxiliary society, assisted in exploration work in that county. This county society has marked with attractive roadside markers some of the principal trails, trading post sites, burial places and other Indian landmarks in the Lake Winnebago region and thus deserved the gratitude of the public and tourists. It had added many specimens to the Indian collections in the Oshkosh public museum.

Mr. Frank H. Lyman, Kenosha, has presented his fine collection of local Indian and other historical specimens to Kenosha county and it is to be installed in cases in the new county court house, now being erected. Groups of Indian mounds, preserved during the year at Amherst Junction and Fox Lake, have been marked with tablets by local organizations.

Mr. Robert P. Ferry, who is in charge of Aztalan Mound Park for the state society, has made additional improvements during the year in planting trees, filling in excavations in mounds and erecting boundary fences. This park and Man Mound Park, near Baraboo, have entertained a constant stream of visitors during the summer months. The Wisconsin D. A. R.

and the Wisconsin Federation of Women's clubs have both aided the Society by raising funds for the purchase of additional land for the Aztalan park.

Dr. George L. Collie, a member, has been appointed to the newly created chair of American archeology at Beloit College and the state society hopes in the future to thus be able to train some of its own fieldworkers at home.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE MEETING AT TORONTO

The annual meeting of the British Association for the Advancement of Science will take place this year in Toronto, from August 6th to 13th, inclusive, under the presidency of Major-General Sir David Bruce, K. C. B., F. R. S. The meeting will be attended by leading scientific men and women from Great Britain and elsewhere, and there is a general and intense desire on their part that the occasion should afford opportunity for personal contact with their colleagues in science in North America. The Wisconsin Archeological Society is invited to be represented at this important meeting. Particulars of the arrangements for the meeting and for excursions in Canada after it, will be furnished.

ARCHEOLOGICAL NOTES

The Wisconsin Archeological Society held a meeting in the trustee room in the Milwaukee Public Museum on Monday evening, January 21. Forty-five members and visitors were in attendance. Mr. Ira Edwards delivered a very instructive illustrated lecture on "A Trip to Mt. Rainier." Exhibits of archeological specimens were made by the Messrs. Thomas A. Hendricks, Vetal Winn and William Willson. At the Executive Board meeting there were elected to membership Dr. O. H. Foerster and Mr. Lex Whelan.

Over 150 persons were present at the meeting of the Wisconsin Archeological Society, held at Milwaukee on Monday evening, February 18, when Mr. George A. West delivered his fine lecture on "The Grand Canyon of the Colorado and Its Cliff Dwellings." This he illustrated with about 150 of the finest colored lantern slides which have ever been thrown on the screen during any lecture before the state society. He was a member of the field expedition sent out by the Milwaukee Public Museum in 1923 to collect archeological and geological materials in this wonderful region. At the close of the meeting Mr. Edward S. Richter exhibited a number of unique archeological and historical specimens. This was the largest indoor meeting of the year.

The Daughters of the American Revolution have contributed the sum of $275.50 to the improvement of Aztalan Mound Park. A check for this amount has been received from Mrs. Norman T. Gill, state treasurer of the Wisconsin Daughters, and this has been placed in a special fund. A contribution of $12.75 has also been received from the Wisconsin Federation of Womens Clubs. To Mrs. H. A. Main, of Fort Atkinson, is due the credit of arousing the interest of these two organizations in assisting in the improvement and extension of this state park.

Mr. Alonzo W. Pond, of Janesville, archeologist and lecturer, expects to leave on about March 1 for Europe where he will purchase archeological specimens and collections for the Logan Museum at Beloit College, Beloit. Mr. Pond has a considerable acquaintance especially with French and Belgian archeological sites, having been several years ago a member of the American School of Archeology in France.

The Messrs. Dr. Frederick C. Rogers and John P. Schumacher, members of the Wisconsin Archeological Society, have been spending a part of the winter in Florida. Both have written of the interesting shell mounds and of other archeological sites in that state. Seventy-five members of the Wisconsin Tourist Society recently held an all day outing at Weedons Island, where archeological investigations are being conducted by the Smithsonian Institution. Mr. George R. Fox has been visiting Indian earthworks and sites at Baton Rouge and other interesting localities in Louisiana.

The Wisconsin Archeological Society will hold its annual meeting in the trustee room of the Milwaukee Public Museum on Monday evening, March 17. It is important that all members of the state society arrange to be present. Annual reports will be presented and officers for the ensuing year elected. An illustrated lecture will be one of the principal features of the program.

The Wisconsin Academy of Sciences, Arts and Letters and The Wisconsin Archeological Society will hold their annual joint meeting at the University of Wisconsin at Madison, on Friday and Saturday, April 11 and 12. The members of both societies are cordially invited to attend and take part in the program. Titles of papers for the archeological section of the program should be sent to Charles E. Brown, State Historical Museum, Madison, and those for the academy program to C. Juday, 35 Lathrop Street, Madison. Titles should be sent in before March 15. The first joint meeting of the society and academy were held at Milwaukee, February 13 and 14, 1908. At that time and for several years afterwards the Wisconsin Mycological Society, Wisconsin Natural History Society and Wisconsin Section of the American Chemical Society also participated in the annual joint meeting. At a meeting held at Milwaukee, December 27, 1907, at which Prof. C. E. Allen, George A. West, Dr. Louis Sherman, Dr. George W. Peckham, Dr. George P. Barth and Charles E. Brown were present as representatives of the several societies, plans for the first meeting were perfected.

The University of Wisconsin celebrated the 75th anniversary of its founding by a meeting of its faculty, students, alumni and friends, held at the stock pavilion, on Monday evening, February 18. The principal addresses were delivered by Justice Burr W. Jones, Robert N. McMynn and Phillip La Follette.

Col. Howard Greene of Milwaukee has been appointed chairman of the Landmarks Committee of the State Historical Society, succeeding Maj. David Atwood. Dr. John G. D. Mack is chairman of the Museum Committee.

Thomas R. Roddy, the well-known Indian trader, died at his home at Pawhuska, Oklahoma, on January 28. Mr. Roddy was for many years a trader among the Winnebago Indians located near Black River Falls, Wisconsin. He removed to Pawhuska about thirteen years ago.

The division of anthropology and psychology, National Research Council, will hold its annual meeting at Washington, D. C., on some date to be determined between April 26 and May 2. Prof. Albert E. Jenks is the chairman of the division.

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These are held in the Lecture Room in the Library-Museum Building, in Milwaukee.

During the months of July to October no meetings are held.

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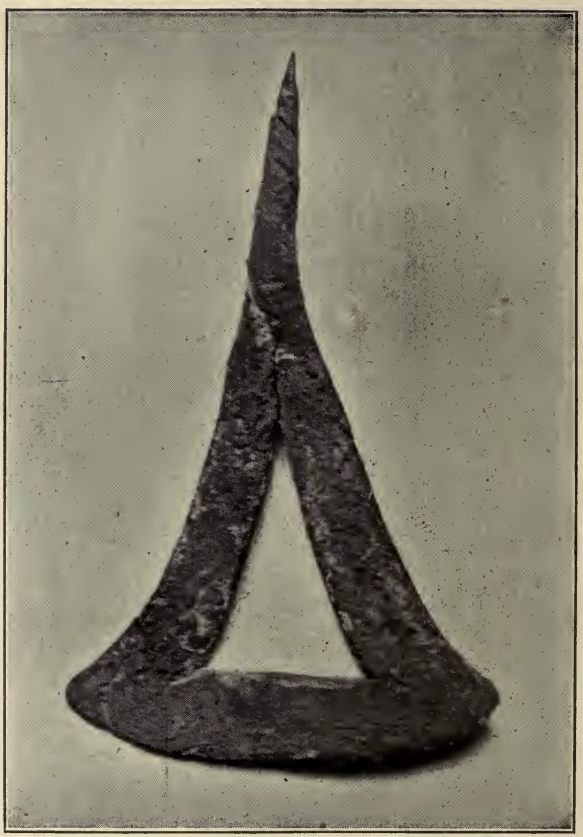

Pronged Copper Crescent
Length nearly 5 inches
Minocqua Lake Region
V. Winn Collection

The Wisconsin Archeologist

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New Series

THE MINOCQUA LAKE REGION

VETAL WINN

The village of Minocqua is situated on a peninsula in Minocqua Lake in the extreme northern part of Oneida County, in the heart of the Lake Region of Northern Wisconsin. The region under consideration, superficially flat, is cut up by an incredible number of depressions, in the bottom of each of which is usually a lake or marsh. These, together with the valleys of the streams, render the surface of the country greatly diversified. The altitude of the region is high, but there are few exceptionally high hills, the tops of the hills and elevated flats being usually on the same plane. The only exception, to the writer's knowledge, is Squirrel Hill, about eleven miles west of Minocqua. The area of the many lakes, as compared to that of the land is very large and the marshes and swamps occupy as much space as the lakes. The soil is light and sandy except in a few places where the sand gives way to a heavier soil and in these places the land is invariably rough and stony. The stony land is somewhat more productive than the other and originally supported the heaviest forest growth, occasionally of oak, maple and other hard woods. Most of the land was originally covered with a sparse growth of Norway and white pine and white birch. The swamps and marshes were often covered with a dense growth of tamarack, cedar, spruce, etc.

At the present time, most of the forests have been cut over, often two or even three times, the best timber being taken each time. A forest fire usually followed each cutting, so that now the wilderness has lost much of its beauty for the lover of nature. A growth of jackpine has taken the place of the ancient forest in many places.

The white population of this region is small and largely employed in lines catering to the tourist trade. Here and there, a few farmers try to gain a foothold, but the number of vacant houses and abandoned fields are eloquent testimony of a losing struggle. The number of tourists coming here during the summer months is large and constantly increasing, owing in large part to the lakes which offer good fishing. The state roads traversing the region are generally kept in excellent condition.

In prehistoric times, the rigor of the climate evidently guided the movement of population much the same as now. We do not find the numerous large groups of mounds, sites of populous villages, and garden beds, to the extent that they are found in more favored parts of the state. However, the good hunting and fishing, and the abundant wild rice crop, undoubtedly rendered it attractive to the Indians at certain seasons of the year. Some locations on islands or peninsulas in the larger lakes would be protected by the water from frosts, early and late, as at present. Therefore, occasional village sites and a few mounds and even a few garden beds occur.

The recorded history of this region begins at a comparatively recent date. None of the French traders or explorers who followed LaSalle's Fox–Wisconsin river route from the lakes to the Mississippi, nor of those who visited points on the south shore of Lake Superior, left any records of explorations here. Undoubtedly many individuals did pass and repass but without recording their adventures. In 1804, however, we find The Northwestern Fur Co., and its rival The X Y Co., each with a fort or trading post on Lac du Flambeau. François Victor Malhiot, a French Canadian, was agent for The Northwestern Fur Co. during this year and his journal gives some interesting views of his surroundings. Writing under date of August 17, 1804, he says: "The heat is excessive, such as we have not had this summer, and strange to say there is frequently frost at night."* It might be pertinent to say here that frost is not only not uncommon in August, but in June as well. Among the articles mentioned as used in trading with the Indians by Malhiot are half-axes, tomahawks,

*19 Wis. Hist. Colls., 191

and large axes. Several specimens of these iron tomahawks and trade axes have been found here in past years.

The boundary line between Oneida and Vilas counties is about two miles north of Minocqua. This is also the southern boundary of the Lac du Flambeau reservation of the Chippewa Indians. The greater part of the reservation is in Vilas County, but it includes a small part of Iron County.

The Indians of the reservation are "civilized Indians." While retaining their native language and customs for family and private affairs, and their native dress for ceremonial and gala occasions, they are in no way the irresponsible savages of a century ago. All except a few of the older people are able to speak the English language fluently. A large number of the young people are also able to read and write. Their ordinary dress is that of civilization. Many of them work in logging camps and on the river drives. Some serve as guides for tourists during the summer months. They make a considerable quantity of beadwork trinkets for sale to tourists and dealers in curios. They also do some farming in a small way. They are not confined to the reservation and are often seen in Minocqua and Woodruff and they make quite long trips off the reservation, especially in the fall to gather wild rice and some other annual wild crops.

INDIAN VILLAGE SITES AND MOUNDS

1. At the foot of Lac du Flambeau, on both sides of Bear River, is the Indian village now known as "The Old Village" to distinguish it from the new village which has sprung up around the Indian school on Long Lake. The old village has been in existence since very early times and today has a population probably as great as in olden times. At the present time, the site of the village belongs to the tribe in common, any member being allowed to occupy as much land as required but no individual owning it. The Indians informed me that the name of the village is Wasawaugan. Some writers have given it as Wasawaugaming.

One of the oldest men in the village is Amikonse. He is reputed to be very well informed in Indian history, traditions, etc. In the summer of 1923, while on a visit to the village, I asked him (through an interpreter) for information regard-

ing the number and location of local Indian villages as he remembered them in his youth. He said that besides the old village where he now resides, there was formerly a village where the village of Minocqua now stands and another on the west side of Minocqua Lake, just north of the channel between Minocqua Lake and Lake Kawaukuesaga. There were two villages at Squirrel Lake, one at the north end of the lake, and one at the south end; one at Squaw Lake, one at Pike Lake, and one at Trout Lake at the mouth of Trout River. He also stated that there was one at Mercer and one at Manitowish. Each of these villages consisted of ten or fifteen Chippewa families and all were permanent settlements.

Questioned about old trails, Amikonse answered that there were no important trails, easy water communication rendering long trails unnecessary. He gave as an illustration that a person going from the village at Minocqua, to that on Lac du Flambeau, would go from Minocqua through Lake Kawaukesaga and down the Tomahawk River until opposite Lake Shishebogama, where a short portage would take him to the latter lake, crossing which, after another short portage, he would arrive at Gunlock Lake. After paddling the length of Gunlock Lake, he would have a portage of about one-half mile to Fence Lake. Fence Lake connects with Crawling Stone Lake. After passing these two lakes, he would again portage to Long Lake, from which he could go by water to the village on Lac du Flambeau. A glance at a map of this region will show that a dry land trail between these two points would have been impractical. It will be noticed that the trails are usually mere portages connecting different bodies of water.

2. John Whitefish lives at the east end of the old village. Just east of his house is a conical mound 20 feet in diameter and 4 feet high. It is about 1,000 feet from the shore of the lake. It has been somewhat mutilated.

3. About one-half mile east of the above mentioned mound, near the lake shore, is another much larger one. This is 50 feet in diameter, and 5 feet high. The road from the old village to the Indian school passes this mound.

4. About three-fourths of a mile northeast of the village and 15 rods east of Bear River, near the southeast corner of Iron County, are two mounds situated about 30 feet apart, the larger 40 feet in diameter and 2 feet high, and the smaller

25 feet in diameter and 2 feet high. They have not been excavated. John Whitefish showed these mounds to the writer. All the before-mentioned mounds have depressions outside the edges indicating that the earth has been cast toward the center from all sides to form the mounds.

5. Whitefish also informed the writer that there are three or four mounds on the west side of Lake Pokegama. He stated that they had been disturbed by relic hunters.

6. Whitefeather, living at the south end of the village, stated that there are two or three mounds near the south shore of Crawling Stone Lake. These the writer was unable to visit.

7. On the west side of Gunlock Lake, near Sunrise Camp summer resort, are three small conical mounds. All have been mutilated by relic hunters.

8. A small village site is on land belonging to Charles Ten Eyck. His place is just south of Highway 70, and west of the Tomahawk River. A creek runs through his land from Lake Malby (known locally as Mud Lake) to the Tomahawk River. Along the creek valley he has found pottery fragments, chipped implements, mostly made of quartzite, and a polished celt, the only one the writer has seen from this whole region. While enlarging a small pond in the creek, he brought up what appeared to be several ribs from a canoe. At the same place he also found a catlinite pipe of the Siouan pattern, inlaid with babbit metal. This pipe is interesting, having been repaired after being broken at the junction of the bowl and stem. In repairing it, several small holes were made in the bowl and stem adjacent to the fracture. The two parts being then joined together, the whole cavity near the break was filled with melted lead, which also filled the small holes on each side of the break. The bowl and stem were then re-drilled and the pipe was as good as new. This site is in Sec. 12, 39-5.

9, 10, 11. The writer did not have an opportunity to visit the sites of the villages on Pike Lake and at the north and south ends of Squirrel Lake, mentioned by Amikonse. He was informed that there are Indian graves near Hansen's resort, near the south end of Squirrel Lake.

12. On the east side of Squaw Lake, at the point where the Oneida-Vilas county line meets the lake, is the site of one of the villages mentioned by Amikonse. This site is a level triangular space of two or three acres, the base being at the water's edge. It is now occupied by summer cottages, making an investigation impossible. At the corner farthest from the water are the remains of a conical mound formerly 20 feet in diameter and 2 feet high. It is now barely discernible. On the higher land, just north of this site, is a cemetery containing fifty or more graves. With one exception, the graves are the size and shape of those of white men, but with the earth heaped up somewhat higher. One, situated among the rest, is really an oval mound, 12 feet long, 4 feet wide, and 3 feet high. It may be the grave of an important personage, or possibly a mound dating from an earlier period. It is probable that this village was settled in comparatively early times. Mr. M. S. Hoyt of Milwaukee found a copper adze at this site.

13. A ridge extending into Long Lake is said to be the site of a recent village of Potawatomi, who were dissatisfied with the homes allotted to them in the west and, returning, settled here for a time. There are several graves, some of which have been excavated.

14. Near the source of Willow River is a rapid, and at this place there is said to be a large mound. The writer could obtain no definite information regarding it.

15. Dr. Carl Schlecht, of Minocqua, stated that when Minocqua was first settled by the whites, sometime in the decade of 1860–70, there was a large Indian settlement at the mouth of the Willow River. There is a family of Indians still living there.

16. There are said to be several Indian graves on the west side of Tomahawk River above Cedar Falls. The growth of underbrush and saplings is very dense here and the writer was unable to locate them.

17. East of Hixon bridge on the Tomahawk River there formerly were several Indian graves. This ground has been cultivated and the graves have all disappeared.

18. On the east side of Tomahawk River, just above the mouth of Squirrel River, is a rather high sandy flat, the edge of which is roughly parallel with the river. On this flat and near its edge for a distance of about one-half mile or more are scattered many coarse chips and other refuse of implement making. The chips are principally of quartzite and rhyolite. In places they are very numerous. Several chipped implements, mostly of rough workmanship, have been found here. Several copper articles found here are a short stout awl or punch, a very small flat arrow head, and the specimen shown in the frontispiece.

19. On the south shore of Lower Kaubachein Lake, just east of the small stream flowing into it from Upper Kaubachein Lake, are indications of a small camp site.

20. Near Rainbow Rapids on the Wisconsin River there is a large cemetery and among the graves a pyramid of stones evidently of Indian construction.

21. Dr. Schlecht informed the writer that a site on the northern shore of Tomahawk Lake formerly bore evidence of long continued occupation. When first homesteaded, it was bare of timber and the ground was heaped up in parallel ridges; evidently garden beds. During cultivation, several specimens, including pieces of pottery vessels and a stone amulet were found.

Near this site was a forest of hard or sugar maple and the Indians continued to make maple sugar for some years after the place was homesteaded. The Indians made receptacles of birch bark in which to gather the sap, and Dr. Schlecht stated that he has seen a heap of these as high as a man's head. In boiling the sap, there was much ceremony, the sap being stirred with "ceremonial paddles," the handle of each being carved in the shape of the head and bust of a woman. These paddles were carefully carved from hard maple and afterward charred brown.

In speaking of the ingenuity of the Indians, Dr. Schlecht stated that he had seen them using tin pails which they had repaired in the following manner: when a pail leaked, they would prepare a flat piece of tin of suitable size and shape and would also clip the ends off several rim-fire revolver cartridges; then placing the tin patch over the leak, after punching several holes through both thicknesses, they would

insert one of the cartridges in each hole and pound it flat, thus making the pail again serviceable. Dr. Schlecht said he had seen such pails nearly covered with patches, yet the work so neatly done as to make the pail water tight.

22. According to Dr. Schlecht there are several tumuli (mounds or graves) on the northwest side of Clear Lake.

23. Near Birch Lake is said to be the site of a recent Potawatomi village which was composed of Indians who had returned dissatisfied from their reservation in Kansas.

24. On the south shore of the east part of Minocqua Lake, partly on the grounds of the Minocqua Golf Club, are several graves. There are said to have formerly been many more.

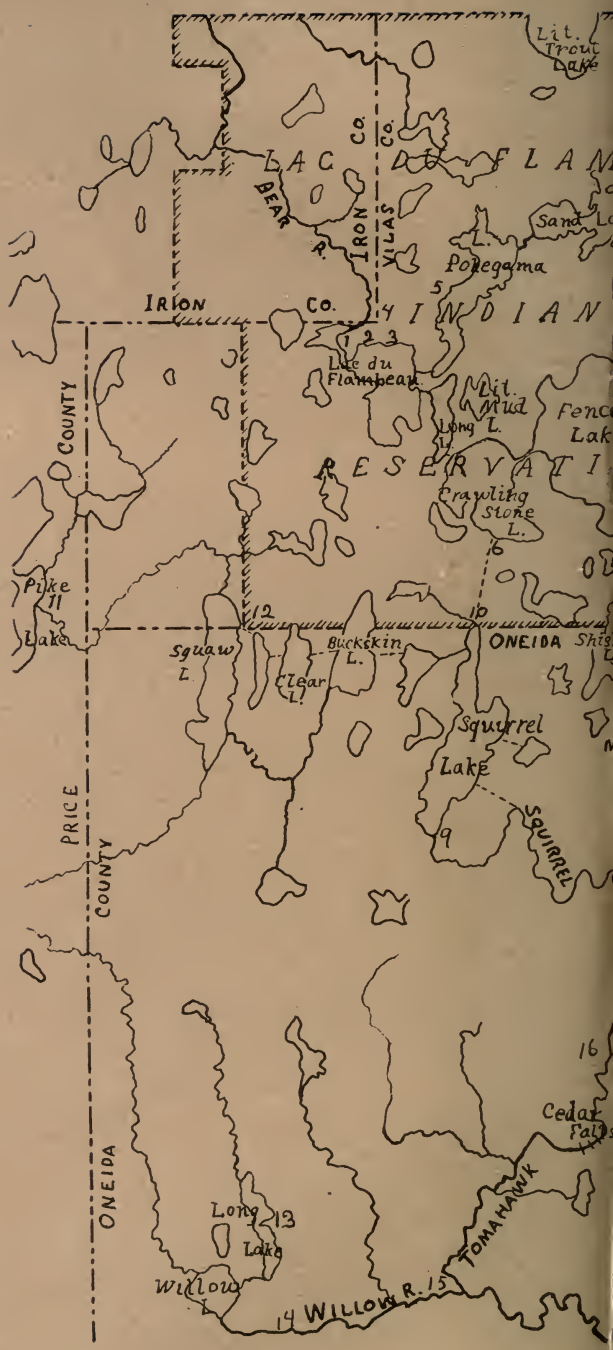
25. In the eastern part of Minocqua Lake is a small island. Here Dr. Schlecht excavated an Indian grave. He described the skeleton as being that of a man above the average size. The body had first been covered with large boulders which were then covered with earth. Several flint arrowheads accompanied this burial.

26. There is an oval mound in the pasture on the Clausen place on the south side of Minocqua Lake. Its diameters are 30x35 feet and it is 3½ feet high. It has been partly excavated. Its presence was reported to the Wisconsin Archeological Society by C. E. Brown and Rev. Leopold E. Drexel in 1908.

27. On the west side of Minocqua Lake on the Col. M. C. Wetmore place, between the C., M. & St. P. R. R. track and the lake shore, are a group of four mounds; three oval and one conical. Their dimensions are:

25 feet x 15 feet, 3 feet high
35 feet x 15 feet, 3 feet high
40 feet x 15 feet, 3½ feet high
26 feet diameter, 3 feet high

These mounds are recent, the local Chippewa reported, being the burial place of a number of members of their tribe who died of smallpox during an epidemic which raged in the village just south of them. This was one of the villages mentioned by Amikonse. The existence of these mounds was reported to the Society by C. E. Brown and Rev. Leopold E. Drexel in 1908. John Ashton, the caretaker of this property, excavated the two larger mounds in about the year 1890 and



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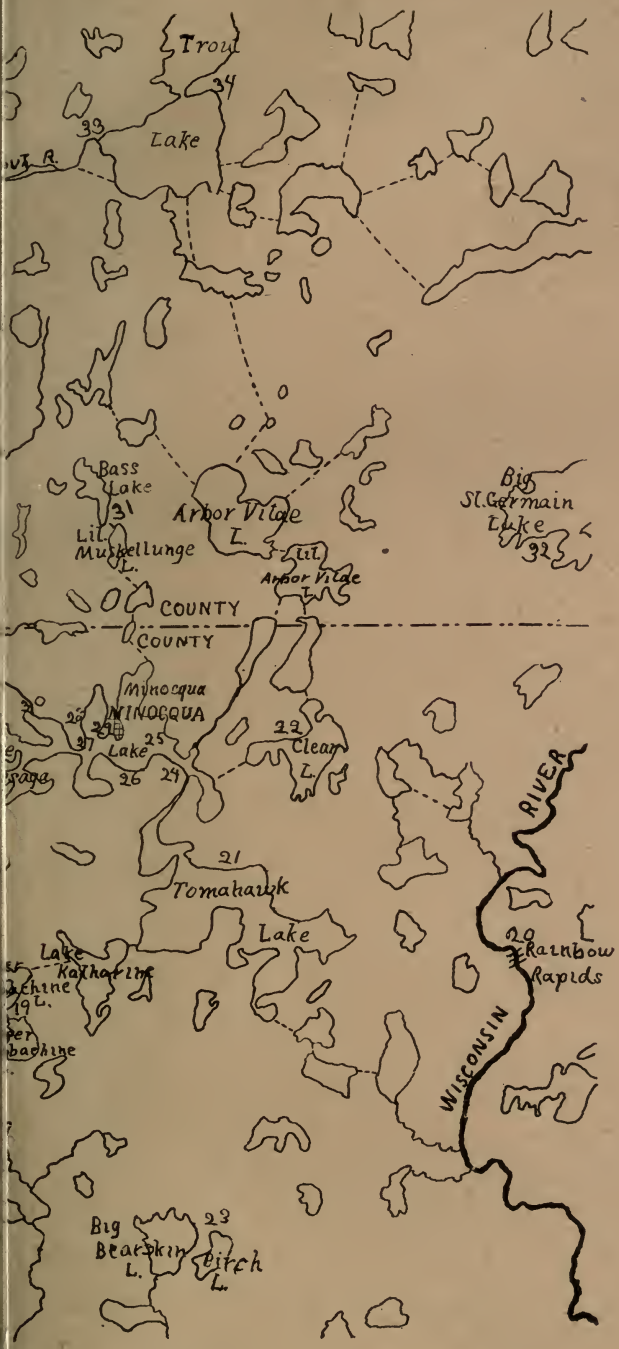

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umbers in the text.

at their bases found the remains of twenty Indians, accompanied by pieces of birchbark and other wrappings.

28. A short distance north of these mounds near the west end of the railroad trestle there is said to have formerly been a large mound. A large copper axe is reported to have been obtained from it. No trace of the mound remains at present.

29. During building operations at various points in the village of Minocqua, a considerable number of graves containing implements, pottery, etc., have been disturbed. These specimens have become scattered and no record of their exact character is procurable.

30. The Tomahawk River rises in Lake Kawauguesaga, which is connected through Minocqua Lake with Tomahawk Lake. On the west side of the river, between the angle formed by the river and the lake shore, is a rather flat tract of five or six acres. It was originally quite stony. Mr. Ben Applebee, the occupant of the land, has cleared the place and used it as a garden for several years. On the opposite side of the river the land rises to a low ridge which runs parallel with the lake shore for a short distance until it merges with the flat. On both sides of the river is the site of an ancient village and is one of the most interesting of the sites I visited while here. Numerous stone arrow and spear heads, pottery fragments, a pendant, and the usual chips and refuse were found on this location. The Applebee family have about twenty-five chipped implements and a copper knife and two spearheads found here. The place is notable, however, as being the site of the workplace of an old Indian coppersmith. A careful examination of this ground yielded, besides perfect specimens, in copper, several implements broken in manufacture and a number of rejects.

The working of copper by the Indians is an interesting subject, and has received much attention from archeologists. Amikonse had a copper knife, which he had found. He professed no knowledge of the method of working copper, saying "That was before my time." In spite of the fact that some early explorers mention the melting of copper by the

Indians*, it seems to be generally accepted by archeologists that they did not melt it but fashioned all articles by hammering and cutting the metal. One of the principal reasons for doubting that they did melt and cast any of it is the absence of molds or other necessary tools. The absence of tools, however, is noticeable in regard to all their operations in manufacturing copper articles. I made careful search of this ground for any tools which may have been used in copper working, but the only implements found were one pitted hammer stone much battered and an anvil stone. Both of these are of the common form found on all sites where flint working was engaged in. Several of the specimens, obtained here, show plainly the results of hammering.

During one of our visits to this site, the writer's son, George, found a fragment of a copper spearhead. It is evidently the rear part of the blade of a spearhead from which the shank has been broken. The front of the fragment is drawn out to an edge smoothly, as though done with a purpose, and is not rough and irregular as it would be if accidental.

In the Milwaukee Public Museum there is a spearhead composed of three separate pieces of copper welded or brazed together. This specimen was obtained from H. H. Hayssen, a former Wisconsin collector, and, aside from being pieced, has the same appearance as an ordinary specimen. The fragment above mentioned is very similar to the corresponding part of the specimen in the museum. Several of the rejects found were bent back upon themselves and hammered in a manner inexplicable, except on the theory that the workman tried to put them in the form of material for further operations. It is apparent that some of the old Indian coppersmiths were able to either weld or braze copper. So far as I was able to learn, no modern relics have been found on the last mentioned site.

31. There were formerly several graves on the farm of Mr. Gus Anderson between Bass Lake and Little Muskellunge

*Shortly after conferring with them about many matters concerning their wars, the Algonquin savage, one of their chiefs, drew from a sack a piece of copper a foot long, which he gave me. This was very handsome and quite pure. He gave me to understand that there were large quantities where had taken this, which was on the bank of a river near a large lake. He said that they gathered it in great lumps, and having melted it, spread it in sheets smoothing it with stones.''—Champlain's Voyages. 18 Wis. Hist. Colls., 162.

Lake. An employee of Mr. Anderson explored several of them and obtained specimens, among which were a large copper knife and another copper implement. These were on exhibition in Chris Olsen's saloon at Woodruff and were destroyed when the saloon burned.

32. There are two mounds at Normandy Court summer resort, on the south side of Big St. Germaine Lake. One of them is in the yard near the house, the other in a field a short distance away. Herman Witt, who reported their presence to me, said they were each about 50 feet in diameter and 4 feet high.

33. The site on Trout Lake at the mouth of Trout River, mentioned by Amikouse, was spoken of by Malhiot in 1804. I was unable to visit the place.

34. There is said to be an oval mound near the government building on Trout Lake. It was excavated several years ago and bones and implements removed.

A CACHE OF COPPER CHISELS

During the summer of 1920, and at intervals since, the family and neighbors of Wm. A. Hubbard found the various pieces of a cache of copper chisel-shaped implements in the southern part of Rhinelander, on the south side of Pelican River, about one mile above its junction with the Wisconsin River. The discovery of this cache was reported by myself and mentioned in THE WISCONSIN ARCHEOLOGIST for April, 1921. Later, Mr. G. R. Moore, who obtained six of the larger specimens, sent a photograph of them which was published in the issue of January, 1922. Since then two additional pieces have been found. To the present time, there have been found eight chisels in perfect condition, two with the edge battered or crumbled away, a fragment of one (about half), and ten or twelve shapeless fragments of copper. Mr. Moore gave approximate measurements of some of those in his possession. The measurements of the others are as follows:

1. 8¼ in.x1⅝ in. edge beveled on one side
2. 7⅝ in.x1⅝ in. edge beveled on one side
3. 3⅛ in.x1⅛ in. edge rather blunt
4. 1⅞ in.x ⅞ in. edge crumbled away
5. 1 in.

The half next the edge of this last specimen is gone. If perfect it would be about the same size as No. 4, that is, nearly two inches in length. The three largest pieces of the cache had their greatest width at about one-third of the distance from the edge to the poll, and the cutting edge sharpened from both sides in the ordinary manner. Three of the other large pieces were widest at the cutting edges, and with the edges beveled on one side.

With one exception, all the pieces of the cache were found in a space a rod in diameter. One of the largest pieces was found several rods from the rest, where it had probably been carried by a harrow or other implement.

The Pelican River here makes a bend like a horseshoe with high land all around on the outside except at one point where a small stream of cold water empties into it. The cache was found on this high land. There are no evidences of a camp or village site here. However, on the opposite side of the river, the land is much lower, but still above high watermark, and would be a fine site for a camp. It has never been plowed, but it is believed that if cultivated, many specimens would be exposed.

VETAL WINN.

ADDITIONAL NOTES ON VILAS AND ONEIDA COUNTIES

CHARLES E. BROWN

Vilas County

Lac du Flambeau (Torch Lake) took its name from the former Indian custom of spearing fish by the light of birchbark and other torches. Here the Northwest Company had a trading post in 1804. François Victor Malhiot was the trader in charge. His journal has been published by the State Historical Society. The Southwest Company (American Fur Company) had an establishment there of five traders and twenty hands. Its fort was located on the north shore of the lake.

An Indian burial mound located on the north shore of the lake was excavated in recent years and a few flint arrowpoints, a catlinite pipe and a few trade glass beads found with human bones buried at its base. Traces of a former Indian village

have been found in the cultivated fields on this shore of the lake. These consisted of scattered hearth stones, flint and quartz chips and fragments, of a small piece of cut catlinite, some deer and other animal bones and several flint and quartz arrowpoints. In the lake, opposite the Chippewa village, there is a large spirit stone or medicine rock to which the Indian medicine men formerly went to prepare "medicine" for ceremonial and other purposes. This rock is sugar loaf in form with a number of cracks and depressions in some of which tobacco offerings may now and then be seen. Fireplace stones and flint refuse were found by the writer in 1908 on the site of a former Chippewa village or camp on the southeast shore of Lake Pokegama on the north side of the road between it and Long Lake. An early Indian village is reported to have been located on Strawberry Island in Lac du Flambeau. In 1908 a Chippewa camp was located on Sand Lake. In Crawling Stone Lake, lying southeast of Lac du Flambeau and Long Lakes and connected with the latter by a stream, there is a spirit rock called the "Crawling Stone." This, some of the Chippewa believe, is inhabited by a spirit which is causing it to move slowly across the bed of the lake.

Mr. Hugo Sauer, Milwaukee, reported to the Society, August 8, 1915, on some earthen elevations, probably mounds, located at the junction of Johnsons Creek and the Manitowish River, between Boulder and Fish Trap lakes. He found a conical mound on a point in Devils Lake, a small lake a short distance northeast of High Lake and with which it is connected by a stream. Several white quartz arrowpoints have been picked up on the shore of Devils Lake, near the mound.

The late well-known Wisconsin archeologist, William H. Ellsworth, reported to the Society, on August 9, 1907, after a visit to the region, that from a village site located between Pike and Round lakes a "large" number of Indian implements had been gathered. Among these were quartz, quartzite and flint points and several knives, hammer stones, a copper point and awl, a grooved hammer, potsherds ornamented with cord-markings, bone awls, iron knife blades and glass beads.

A letter received by the writer from Mr. George A. West, Milwaukee, dated August 22, 1913, concerning the Indian remains at Trout Lake, contained the following information:

"I have just returned from Trout Lake, Vilas County. I made a pretty thorough examination of the whole shore of the lake and find some interesting features not reported by J. J. Wright who mentions some Indian graves, ridges and corn hills. What I am going to report relates to the same that he mentioned.

"The location is NE¼ of Sec. 14-41-6E. I found there seven low oblong and conical burial mounds. They are close together, one almost touching the other, averaging about 12 feet across and 3 feet high. Each had been dug into, and around the open pit were fragments of human bones. Beyond these and in the vicinity are apparently a large number of modern Indian burials. Nearby is a village site. The ground contains large numbers of flint flakes. There are no "artificial ridges" [garden beds].

"The greatest object of interest, although historic, is the foundation of the old Hudson Bay Trading Post, located within a stone's throw of the village site and of the mounds. I collected while there five iron harpoons, four of them with two barbs each, and one of them with one barb. I also collected one hoe, made of iron and very crude. Beside this, one iron tomahawk bearing the "dogs-foot" imprint, the Hudson Bay Company's mark. Also part of an ax was secured showing a battered end, indicating uses as a wedge. Another curious iron implement and early historic is an iron creeper, made to fit over the sole of the shoe or moccasin, containing four sharp pointed projections and used for walking over ice.

"All of these I take pleasure in presenting to the Wisconsin Historical Society.

"I also picked up four copper beads of sheet copper. All of the above were found near this old trading post on the above mentioned village site."

Mrs. Mary R. Mann, of Woodruff, reported to the Society, March 23, 1906, that when she and Mr. Mann first located at Trout Lake there were near the site of their summer resort on its west shore a number of Chippewa graves. These were protected by logs laid up in "cob-house" fashion. They were from 14 to 18 inches high, the pen being filled with earth. Logs may once have been laid across the top but these had been removed or had rotted away. Indian corn hills were located here also among the pine trees. Some of these trees were three feet in diameter. Among others who furnished information to the Society about the Indian remains about Trout Lake were Dr. E. A. Birge (1906), Albert O. Barton (1912) and Hon. M. B. Rosenberry.

Mr. J. M. Pyott reported the existence of a mound on Spider Lake one of the so-called "Manitowish Waters" between John Carby's and Baum's resort (September 17, 1912). This earthwork was explored by Mr. La Fabe who found a "stone axe, stone pike and arrow heads" with human remains at its base. Three Indian graves were located on Engelman's point opposite Buck's resort. In one of these a squaw axe, tomahawk and pipe were found. A piece of buckskin was found on the breast of the skeleton. These graves were protected with wooden shacks or small shelters. A cemetery was located at Engelman's resort. These graves were just west of the others on the high land of Manitowish Lake. An Indian camp site is located on Jack's Point, Rest Lake, northwest of Stone Lake.

Three conical mounds are located a short distance east of Mann's Cabin, on the south shore of Boulder Lake. According to a report received from H. C. Fricke, Milwaukee, August 15, 1905, one of these was excavated about three years before by summer resorters from Chicago, who found human bones near its base. There were some Indian corn hills also on a point on this lake. Mr. Alonzo W. Pond reported the presence of several log-covered graves at Wild Cat Lake, northeast of Boulder Lake (August 1919).

A group of four burial mounds is located on Fox's Island in Rest Lake. One of these was explored and iron axes, pieces of gun barrels, a hammer stone, hexagonal spectacle glass, glass beads, a tin pail and other articles found. The results of this exploration were given by Mr. James G. Allbright in a report published in The Wisconsin Archeologist, in 1902.* The specimens were placed by him in the Milwaukee Public Museum.

The name given to Lake Vieux Desert is French Canadian and means an old clearing. Hence this large lake located on the Wisconsin–Michigan boundary line has also been known as "Old Plantation" Lake. Its shores have been inhabited by Indians for a long period of time. Remains of Indian cultivation can still be seen on an island in this lake. This planting ground was reported by Capt. Thomas J. Cram in 1840. This lake was for years, it is reported, a rendezvous for "bad" Indians, outcasts from reservations in both states. Some Indian graves were located near the Hillside resort. There is an Indian village on this lake at the present time.

*V. 2, No. 1.

On the shores of Sand Lake the Chippewa had a dance ground. These Indians gather wild rice in Rice Creek near Big Lake, in Duck Lake (F. J. Addicks, October 15, 1912), Palmer Lake and in other waters in this region. Mr. W. W. Gilman reported the location of some Indian graves on the shore of Tenderfoot Lake (August 22, 1916). These are similar in their character to other Chippewa graves found in other places in these counties.

Oneida County

Three groups of mounds located near the Tomahawk River northwest of Heafford Junction, near the Oneida–Lincoln county line, were located by the Messrs. J. P. Schumacher and W. A. Titus when conducting investigations for the Wisconsin Archeological Society in this part of northern Wisconsin in 1913. These were situated in Oneida County, portions of each group extending southward into Lincoln County. Two other smaller groups are located west of Heafford Junction, in Lincoln County. Altogether, in these five groups, they found seventy-six mounds. All but one, a tadpole-shaped earthwork, were conical and oval in form. All are described and figured in The Wisconsin Archeologist.*

Dr. Louis Falge reported (October 15, 1914) the existence of a group of mounds at Thunder Lake, west of Three Lakes, also the presence of an Indian cemetery on Planting Ground Lake in the same region. The preparation of a full report on these was prevented by his death. Mr. W. H. Ellsworth reported the presence of several Indian graves on the shore of Eagle Lake—another lake of the Eagle Waters (November 2, 1904).

From Mr. Joseph Ringeisen, Jr., a report was received on January 8, 1913, of the location of a grave mound at Camp Ruth, three miles from Harshaw P. O. This grave was constructed by laying logs over the body and covering these with earth. The interment had been made probably within the past fifty years. Two burials were found here. With one was a necklace made of five cent coins and with the other an iron hatchet. A modern Chippewa camp was located on the northwest shore of Rice Lake—a small lake situated a short distance southeast of Harshaw.

*V. 12, No. 3.

Indian mounds are reported to be located on the shore of Pelican Lake, in the southeastern corner of Oneida County. No survey of these has been made. The Milwaukee Free Press of July 26, 1908, contained a brief account of the exploration of a mound at Pelican Lake by George Patton and L. H. Eaton, of Chicago. With the single burial which it contained there were found a stone celt, a copper knife, copper rings and a tooth (bear?) necklace.

A large conical mound is located on the rear of the V. A. Lamson lot on Howards Point on the shore of Tomahawk Lake. Large trees stand on this prominent earthwork. Reported by V. A. Lamson to the Society, November 23, 1914.

Chippewa camps and villages were once located on the shores of many of the numerous lakes in Oneida County. Unfortunately no one has yet collected and recorded this information. Such a camp was in recent years located on the shore of Sand Lake northeast of Tomahawk Lake. Another was, and may yet be, situated on the west shore of Indian Lake—a lake situated north of Sugar Camp Lake.

At Tomahawk the Messrs. Schumacher and Titus found that reported Indian village sites had been submerged by the waters of the dam. Two or three miles north of Tomahawk they found several Indian graves.

Closing Remarks

The Wisconsin Archeological Society requests the assistance of residents of Vilas and Oneida counties and of others visiting this beautiful lake region in reporting the character and location of other early or recent Indian remains. It is highly important that the former Chippewa names of as many as possible of the lakes and streams should be recovered and recorded. Also that the courses of all of the former land and water trails should be ascertained. Doubtless numerous other village and camp sites, burial places, planting grounds, mounds, sugar camps, boulder shrines and other evidences of Indian occupation of the region await discovery. This information the Society desires to receive and file for future use.

ARCHEOLOGICAL NOTES

Meetings

The Wisconsin Archeological Society held its annual meeting at the Milwaukee Public Museum on Monday evening, March 17. President Skinner opened the meeting. There were fifty members and some visitors present. Secretary Brown made an announcement of the annual Joint Meeting to be held with the Wisconsin Academy of Sciences, Arts and Letters, at the University of Wisconsin, at Madison, on April 11-12. He announced the deaths of Francis H. Lyman, Kenosha, and Dr. John G. D. Mack, Madison, members of the Society, also the election to membership of Dr. Edward Sickels, of Dixon, Illinois. The Beloit Historical Society was preparing to erect a tablet on the mound group on the Beloit College campus. The city of Oshkosh had finally accepted the gift of the Edgar P. Sawyer mansion thus providing a home for the public museum of the Winnebago County Archeological and Historical Society. The annual meeting of the central section, American Anthropological Association was to be held at Ann Arbor, on March 28-29. The Michigan Archeological Society had been organized at Lansing, on January 17, with Mr. George R. Fox as president and Edward J. Stevens as secretary-treasurer.

On the motion of Mr. Charles G. Schoewe, President Skinner appointed as a nominating committee to nominate officers for the ensuing year the Messrs. Charles E. Brown, Winfield W. Gilman and Dr. Alfred L. Kastner.

The following officers were nominated and elected unanimously: President, Dr. Eberhard J. W. Notz; vice presidents, William H. Vogel, Charles G. Schoewe, Aden T. Newman, Dr. Frederick C. Rogers, Mrs. Edwin H. Van Ostrand, Huron H. Smith, Alanson Skinner; directors, H. E. Cole, Dr. George L. Collie, Mrs. H. A. Main, A. P. Kannenberg, R. P. Ferry, E. F. Richter, Mrs. H. E. Koerner, Lee R. Whitney, Dr. H. L. Tilsner; treasurer, Milo C. Richter; secretary, Charles E. Brown. A vote of thanks for their services was extended to the retiring officers. The Secretary and Treasurer Dr. William H. Brown presented their annual reports, which were accepted. After the close of the business meeting Mr. Huron H. Smith gave an illustrated lecture on "The Medicinal Plants of the Chippewa Indians."

President Dr. E. J. Notz conducted the meeting of the Society held on April 21. Forty members and visitors were in attendance. Mr. Ralph N. Buckstaff delivered an illustrated lecture on "Constellations of a Pawnee Sky Map." This was greatly appreciated by the members. Mr. Alanson Skinner gave a talk on "The Pawnee Indians." Mr. George A. West reported on certain archeological investigations conducted by himself during a recent trip to Tryon, North Carolina. He exhibited two notched soapstone implements found there.

At the meeting of the executive board held earlier in the evening the committees appointed to serve during the year were announced. The death of Mr. Richard Leach, Kansasville, was reported by Secretary Brown. Mrs. Adah L. Crist, Beloit, and G. M. Thoene and Alfred R. Rogers, Milwaukee, were elected members of the society.

Sixty members and visitors were present at the meeting of the Society held on May 19. President Notz occupied the chair. The program of the meeting was an exceptionally interesting one. Lieutenant-Commander E. W. Davis, U. S. C. G., favored the members with a talk on "The Alaskan Eskimo." Prof. Nand Singh gave an illustrated lecture on "The Antiquities of India", and Mr. T. W. English an inspiring talk on "The Teaching of Wisconsin History." Secretary Brown presented a brief report on the results of investigations conducted by Mr. Stoughton W. Faville, Mr. Robert P. Ferry and himself, on May 12, in the Crawfish River region near Milford, Jefferson County. At the close of the meeting exhibits of specimens were made by E. F. Richter, Dr. H. L. Tilsner and Robert Davis. At the meeting of the executive board Mr. J. H. Martin, Racine, was elected a member of the Society. The need of further improvements at Aztalan Mound Park was discussed.

The Wisconsin Archeological Society and the Wisconsin Academy of Sciences, Arts and Letters held their annual joint meeting at the University of Wisconsin, on Friday and Saturday, April 11 and 12. The meetings were held in the auditorium in the Biology building and were as interesting and successful as in previous years. Among the members of the Archeological Society who presented papers were Miss Louise P. Kellogg, John G. Gregory, Prof. Nand Singh, T. W. English, R. N. Buckstaff, Ira Edwards, G. B. Phillips, and C. E. Brown. Many members of both societies attended the sessions. On Friday evening a dinner was held at the Woman's building. Prof. Max Mason delivered an address to the members on this occasion.

The Wisconsin chapter of Friends of Our Native Landscape held its annual meeting at Big Sauble Point near Ludington, Michigan, on May 30 to June 1. Here the beautiful dune region was visited. Plant study expeditions were conducted under the leadership of Dr. Henry C. Cowles and other botanists. The program was conducted by the Illinois chapter. Groups of interested persons from different Michigan cities attended the meeting.

SURVEYS, IMPLEMENTS AND COLLECTIONS

Mr. Harry J. Lemley, of Hope, Arkansas, reports the finding of a fluted stone axe in Nevada county, in that state. "This is the first fluted axe that we have ever heard of being found in the south. The flutes are not deep but are plainly discernible, and deeper on one side than on the other. In other respects, the specimen is a true Arkansas grooved axe. The flutes are straight, running down from the groove to the cutting edge. It is an unusually large specimen, possibly seven inches long." The only other fluted stone implements reported as found outside the boundaries of Wisconsin are a fluted celt found in Ontario, Canada; a fluted celt found in the Saginaw Valley, Michigan, one in New York state, several found in northeastern Ohio, and a fluted axe found near Stillwater, Minnesota.

The Wyoming Historical and Geological Society of Wilkes-Barre, Pennsylvania, is conducting an investigation of the archeological history of Eastern Pennsylvania. This region was a favorite resort of the redman. It has never been systematically investigated. The society has issued a printed circular asking the cooperation of residents of that region in locating and reporting Indian implements and other remains. Members of the Wisconsin Society who possess specimens or information concerning the archeology of this region are requested to communicate with the Wyoming society.

PUBLICATIONS

The University of Wisconsin has published for the use of students attending the 1924 Summer Session two new leaflets of its local history and landmarks series. These are entitled "Campus Landmarks" and "Lake Mendota Historical Excursion." Copies may be obtained by addressing the State Historical Museum, Madison. Enclose a two cent stamp with your request.

An interesting collection of Southern Indian folklore tales collected by Caroline M. Brevard, instructor in history at Florida State College for Women, Tallahassee, have appeared in a neat and well-illustrated booklet, "Around the Lightwood Fire." It is printed by the B. F. Johnson Publishing Co., Richmond, Virginia. The stories which it contains are written in such a style as to be particularly interesting to young people and are well adapted for school use.

A pamphlet "Early Days Among the Cheyenne and Arapaho Indians," by John H. Seger, issued by the University of Oklahoma, at Norman, Oklahoma, gives a very interesting account of his years of service on a reservation in Western Oklahoma.

Two new bulletins issued by the Bureau of American Ethnology are No. 80, "Mandan and Hidatsa Music," by Frances Densmore, and No. 81, "Excavations in the Chama Valley, New Mexico," by J. A. Jeancon.

OTHER NOTES

Col. Howard Greene is the new chairman of the Landmarks Committee of the Wisconsin Historical Society. Alanson Skinner, for several years past connected with the department of anthropology of the Milwaukee Public Museum, has returned to the service of the Museum of the American Indian, Heye Foundation, New York.

All members of the Wisconsin Archeological Society are requested to assist as much as possible during the summer by conducting investigations in their home and other counties and reporting the results to Secretary Brown. Persons who are interested in Wisconsin Indian history and landmarks should be enrolled as members. It is important that wherever possible additional Indian mounds and other notable native landmarks should be preserved and marked. Tourists should be encouraged to visit the mounds preserved at Aztalan, Devils Lake, Man Mound Park, Beloit, Fort Atkinson, Madison and in other places in the state.

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WISCONSIN GRAVEL PIT BURIALS

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MILWAUKEE

Wisconsin Archeological Society

Milwaukee, Wis.

Incorporated March 23, 1903, for the purpose of advancing the study and preservation of Wisconsin antiquities.

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MILWAUKEE COUNTY PARKS—G. A. West, Dr. S. A. Barrett, H. H. Smith, Mrs. Theodore Koerner and C. G. Schoewe.

SESSIONS

These are held in the Lecture Room in the Library-Museum Building, in Milwaukee.

During the months of July to October no meetings are held.

MEMBERSHIP FEES

Life Members, $25.00 — Sustaining Members, $5.00

Annual Members, $2.00

Junior Members, $.50 — Institutional Members, $1.50

All communications in regard to the Wisconsin Archeological Society or to the "Wisconsin Archeologist" should be addressed to Charles E. Brown, Secretary and Curator, Office, State Historical Museum, Madison, Wisconsin. Dr. W. H. Brown, Treasurer, 1240 Second St., Milwaukee.

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Cliff Dweller Vessels
W. A. Titus Collection

The Wisconsin Archeologist

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New Series

INDIAN GRAVEL PIT BURIALS IN WISCONSIN

Charles E. Brown

In the past fifty or more years Indian burials have been frequently encountered in the gravel knolls, hills and ridges of eastern Wisconsin. Their discovery has generally been made in the removing of sand and gravel for highway and other construction purposes and in the excavating of sites for buildings. Because the larger number of these graves have been disturbed, quite accidentally, by workmen ignorant of their interest, the obtaining of full and accurate information concerning the manner of burial has often been difficult or impossible. Often their discovery has not been made known to the archeologist until a long time after the date of their exposure.

The burials of this character recorded up to the present time, with a single known exception, have been found in the eastern Wisconsin counties in a part of the state designated on geological maps as the Wisconsin Drift. This geological area extends from Illinois northward to the Lake Superior shore. At the Wisconsin–Illinois boundary it is about forty miles in width, extending from the shore of Lake Michigan westward to Walworth. From Milwaukee westward to just beyond the Madison lakes its width is about ninety miles. North of Madison its western limit is at Kilbourn. Here its width is also about ninety miles. At the head of Green Bay it extends from the Lake Michigan shore westward to a point a few miles east of Stevens Point on the Wisconsin River. Here its width is about ninety-eight miles. North of Stevens Point its western limit is a few miles east of Antigo. In this region are located the lakeboard cities of Milwaukee, Racine,

Kenosha, Sheboygan, Manitowoc, Two Rivers and Kewaunee and the interior municipalities of Waukesha, Watertown, Jefferson, Ft. Atkinson, Madison, Portage, Columbus, Fond du Lac, Oshkosh, Ripon, Neenah, Appleton and Kaukauna.

"In southeastern Wisconsin there are more than 1400 oval hills of glacial drift in an area of 4200 square miles. There are fully as many of these hills in the northeastern part of the state. They are called drumlins and were made by the continental glacier." (Phys. Geog. of Wis., 221.)

In these gravel hills and ridges formed by the glacial ice sheet Indian burials have been frequently found.

There were probably two principal reasons for the selection of these gravel hills as burial places—the sites were prominent and the digging of the graves in the loose sand and gravel easy. The digging implements of the Indian were of a simple character and consisted of pointed sticks, points of antler, stone spades and hoes or trowels made of the shoulder blades of the larger animals. In addition to the Indian burials in the gravel knolls and hills other burials occur in the numerous earthen mounds of eastern Wisconsin and in the sandy and clay soils of former village and camp sites in the river vallleys and on the lake shores. Of these burials no account is taken in this paper.

The gravel pit burials described in the following pages are those which are recorded in the records of the Wisconsin Archeological Society. Descriptions of some of them have previously appeared in the county and other reports which it has published. Others have been found, but as no certain data concerning them is available at the present time they are not included in this paper.

These graves are but seldom, if ever, arranged in any definite order or in "cemeteries" as are those of some village sites. They are generally shallow, from about two feet to three feet below the natural surface of the soil. There are several distinct types of burial.—1. Full length or extended burials. 2. Folded or flexed burials, the skeletons lying on their backs or sides with the legs drawn up or bent under them. 3. Flexed burials made in shallow cup-shaped pits, the skeletons being bent and crowded into them. 4. Burials consisting of a few

bones or a bundle of disjointed bones. The latter burials are probably re-burials from temporary burial places on scaffolds or in canoes. The cup-shaped pits occupied by some burials are in some instances very probably former cooking holes or provision pits. Ashes, charcoal, fire-blackened earth and burned stones occur in some of these. Indications of a former fire also sometimes accompany the extended and flexed burials.

The interest of the gravel pit burials of eastern Wisconsin lies chiefly in the rich store of stone and copper implements and ornaments which often accompanies such interments. The implement deposits appear to be, as a general rule, much richer than those accompanying burials in the mounds of this part of the state or found in the graves located on the village sites. Earthenware vessels, shell implements or ornaments are also sometimes found with these kame burials. Because of the perfect drainage of the sandy and gravelly soil the bones are often very well preserved. The skins and woven materials in which some of these bodies were probably wrapped when buried and any articles of clothing which the dead may have worn have disappeared, as have also other perishable materials which may have been placed in the grave.

Some of the graves are of the contact period and contain iron implements, glass beads and similar articles obtained from Indian traders. From the nature of the stone and copper implements, ornaments and ceremonials found with some of the burials it is quite certain that these are the remains of Indians of Algonkian stock, probably of the Potawatomi, Menomini and other Algonkian tribes who inhabited parts of this region from a very early date up to the time of the coming of the white settlers. Some are probably Winnebago burials.

It is quite certain that the future will discover many additional burials in the gravel hills and ridges. The present contribution is to be regarded as of merely a preliminary character, its purpose being to place at the command of students of Wisconsin archeological history such data on this subject as is at present available.

COUNTY RECORDS

Burnett County

Four sandstone arrowshaft grinders were found while grading down a hill for a public highway in the southwest corner of Section 13, in the Township of West Marshland, in this northwest Wisconsin county, on November 8, 1906. Two of these implements are in the Henry P. Hamilton collection in the State Historical museum. Human remains were found in this hill near these implements. The largest of these grinders is about ten inches in length, rectangular in form and with squared ends. Its width at the extremities is about 1½ inches and its thickness about one inch. A shallow groove extends the entire length of one face of this implement. This region is in the Wisconsin geological area referred to as the Older Drift. North of it is the Wisconsin Drift and south of it the Driftless Area.

Calumet County

While hauling gravel from a gravel pit in Brillion Township, Calumet County, in May, 1910, Oscar Schaubs found a socketted copper spear. The presence of human bones indicated its association with a burial. This spear is in the H. P. Hamilton collection, in the State Historical Museum.

Burials in a gravel pit near Charleston were accompanied by several flint knives and copper spearpoints. Flint and copper implements were found with a burial in a sand hill near Chilton. Burials accompanied by stone and copper implements were also found in a gravel pit on the John Ecker farm, on Stockbridge Lot 49, near Quinneyville; in a pit on the Charles Briggs place, on the old Military Road, at Brothertown, and on the George Heller place near Calumet Harbor. All of these burials were disturbed in the years just previous to 1907. Some were extended and some flexed burials. In Rantoul Township two flexed burials were removed from a gravel pit located on the south side of the road leading to Potters.

Dane County

In the Four Lakes region, about the City of Madison, Indian burials have been disturbed in a number of gravel hills. In operating the Pich gravel pit, located at the northern end of the old Dividing or Dead Lake ridge, separating Lakes Monona and Wingra, burials have been disturbed at different times in the past twelve years. These skulls and bones fell to the floor of the pit with the loosened gravel so that no information concerning the position or exact character of the burials was obtainable. One of these crania is preserved in the State Historical Museum. So far as known no implements accompanied any of these interments. The local Winnebago are reported to have had a small cemetery on the crest of the ridge near this place in the year 1838.

A human skeleton disinterred from a steep part of a gravel hill at Wa-che-et-cha Park, on the east shore of Lake Waubesa, was surrounded by boulders. Burials were also found in a gravel pit on the B. Larsen place on the same shore of this lake. In a recent extension of this pit a human skull was found at a depth of a foot in the loam which overlays the gravel. No other bones were found with it.

Dodge County

An Indian burial was disturbed in working a gravel pit on the west side of the Beaver Dam to Fox Lake road. This occurred in 1900 or 1901. The pit was situated about one-half mile south of the village of Fox Lake. The grave was about four feet below the top of the hill, one end being exposed during the digging. On being further investigated this interment was found to be resting on a limestone slab, the grave being enclosed at the sides and ends with rough slabs of the same stone.

At Fox Lake two burials were found in a small gravel pit which had been opened at the rear of two of the cottages of the so-named South Shore Resort. The bones were struck by a scraper and reduced to fragments. No implements were found with these.

On August 4, 1912, the bones of four Indians, one skeleton being that of a child, were disinterred in removing gravel from

a large pit on the Alex McCarthy farm, on the west shore of Fox Lake. These rested at a depth of 3½ feet below the top of the pit at least one of them being in a flexed or folded position. Accompanying one of these burials were the remains of a necklace of small disk-shaped shell beads. There were between one thousand and fifteen hundred of these. A search failed to locate any other implements or ornaments.

In constructing the public road opposite the P. M. McCarty farm, located just south of Beaver Dam, an Indian grave was disturbed by the road scraper. No implements were found with these bones.

In the State Historical Museum there is a bird stone which was found with a burial in a gravel pit at Hustisford, in the year 1870. No details of this burial are available.

In the Ringeisen collection at Milwaukee there is a large flint ceremonial knife which was found lying on the breast of a skeleton found in a gravel pit located on the Bartell place, situated about 1½ miles southwest of the village of Theresa. This occurred in October, 1911. The skeleton was examined by a local physician and pronounced to be that of a young girl. This fine blade is made of a flesh-colored flint and is 12⅛ inches in length and from ⅜ to ¼ inch in thickness.

Door County

In December, 1905, a group of fifteen well-chipped blue hornstone knives was unearthed with a skeleton in a grave on the V. Mashek place, in Section 10, Sebastopol Township. The grave was partly exposed in the cutting of a road through a hill. The knives were in a small heap by the side of the skeleton which appeared to have been laid on its side in a flexed position, several feet below the surface of the ground. These knives are from 4¾ to 6⅝ inches in length and from 1⅛ to 1⅞ inches in width at their middles. A single-stemmed spear point made of grey fossiliferous flint, 8½ inches in length, was found with the knives. All are in the Joseph Ringeisen collection at Milwaukee.

Fond du Lac County

A large number of Indian burials have been disturbed in the past thirty or more years in the gravel hills south of

Calumet Harbor and at Calumetville, on the eastern shore of Lake Winnebago. With these a quite large number of stone and copper implements and several pottery vessels have been found. The burial places at Calumetville are described by Dr. A. Gerend as shallow pits from two to three feet in diameter and in depth. They are exposed by workmen digging in the gravel deposits. When exposed they are found to be filled with black topsoil in which are fragments of charcoal, ashes and human bones. The pits are frequently only a few feet apart. A few years ago thirty-six skeletons were unearthed in three days in a gravel pit on the land of Miss Barber. Among the neck bones of one were the beads of a copper necklace. These burials were all flexed and were placed in a sitting posture, reports Dr. Gerend, in pits two or three feet in diameter and from three to seven feet deep. In some of these pits there was unmistakeable evidence of fire. Mr. George Brugger, the Fond du Lac collector, had a necklace, a copper spear point, a pottery and a stone pipe and several earthenware vessels found here. A pottery vessel in Dr. Gerend's collection was found in a gravel pit on the Philip Ebling place, one mile south of Calumet Harbor. It was broken when found and has been restored. Other gravel knolls on the Liebert and Peter Weinreis farms have contained skeletal remains and implements.

In digging a basement for a barn on the Peebles farm, in the SE ¼ of the NW ¼ of Section 32, Taycheedah Township, in about the year 1875, Indian burials were disturbed. Several flint arrow points and about a dozen shell beads were found with these remains. These beads are cylindrical in form and 4½ and 5½ inches in length. They are probably made from pieces of large sea shells. Two are in the Brugger collection.

A shell vessel in the Brugger collection was found in August, 1909, in the digging of a basement on the Matt. Michel farm near Peebles, in Section 20, Taycheedah Township. About twelve skeletons were removed during this digging. They were buried at a depth of about 2½ feet beneath the surface of the soil and laid in every direction, some extended at full length face up and some face down. At one place the remains of at least four Indians were found in a pit. These were in a flexed position. The sea shell was the only imple-

ment found with these burials. It is a helmet shell (Cassis sp.) and is 11¾ inches long, its width across its widest part measuring 9 inches. A large portion of the lip and side of this shell has been cut away. The columnella has also been removed. This vessel is figured in Plate 2 of The Wisconsin Archeologist, V. 12, No. 2.

Burials were found in a gravel pit near a former Indian village site located on the west branch of the Fond du Lac River, in Sections 18 and 19 of Fond du Lac Township. also in a pit on the south side of the Military road, in the E ½ of Section 34, Calumet Township. Both of these records were reported by Mr. Brugger in 1907.

In the W. H. Elkey collection, in the Logan museum at Beloit, there is a ceremonial knife which was obtained in 1901 with several Indian interments in a gravel pit located about three miles east of the city of Fond du Lac. Its length is 10 inches and its blade 3 inches wide at its middle.

In July, 1908, a skeleton was uncovered in the Huber pit, on the Division Street road, about two miles east of Fond du Lac. The workmen reported this burial as having been made in a "sitting position." This was interpreted to mean that the body was flexed and was then buried in an upright position in a pit grave.

A pottery vessel accompanied a burial in a gravel pit at Silica, Fond du Lac County. This vessel is 3 inches high and 4¼ inches in diameter. "It is of a lenticular flask shape, surmounted by the head of an effigy, probably intended to represent a turtle. The opening, situated back of the head, is circular and about 1½ inches in diameter. There are incised ornamental lines along the border. It is in the Rudolph Kuehne collection at Sheboygan. The material of which it is made is of a dark grey color and is shell tempered. A vessel obtained with this one is "of a globular shape with a polished surface and undulate expanding rim. It is made of a black, shell-tempered clay and is ornamented at the shoulder with a zigzag pattern of incised lines. Its height is 4 inches, rim diameter 3 inches, and greatest diameter 6 inches." It is in the collection of Dr. A. Gerend. These vessels are illustrated in Plate 10 of the Wisconsin Archeologist, V. 14, No. 1.

In the spring of the year 1914 an Indian skeleton was taken from a gravel pit located about one mile west of Round Lake, in Osceola Township. No implements were reported to have been found with it. A number of large flint implements accompanied a burial found in a gravel pit in the SE ¼ of Section 36, Marshfield Township.

Jefferson County

In the year 1916 a deposit of twenty-five leaf-shaped flint blades and several broken flint blanks was found in a gravel pit on the old Silliman farm on the south side of the Crawfish River at Milford (S ½ of the NE ¼ of Section 5). Near these a human jaw bone was found. Other human bones, if they were present, were not noticed at the time of this discovery. These blades are made of white flint of an inferior quality, marked with flesh-colored spots, and are from 3 to 3½ inches long and 1½ inches wide. They are in the collection of Mr. S. W. Faville. In digging a foundation for the town hall at Milford two skeletons were unearthed.

In 1905 Mr. W. H. Elkey reported the finding of some copper and shell beads, flint implements and stone axes with several burials in a sand pit a short distance east of Watertown Junction. These specimens fell into the hands of the workmen and were scattered. Indian burials were also encountered in a gravel pit on the Crandall farm, located north of the Rock River and south of the railroad tracks at Watertown.

In 1923 human bones were disturbed in working the Whitney gravel pit at Jefferson. A human jaw bone and an arm bone showed indications of having once been broken. Two stemmed copper spear points, a copper crescent, a copper awl and other implements, the character of which is unknown, were found with several burials in removing gravel from a pit on the south side of Aulesbrooks Pond, on the Edward Spence farm, north of the Oconomowoc River, in the southwest corner of the NE ¼ of Section 10, Concord Township. The implements mentioned are in the collection of Dr. Frederick C. Rogers.

Burials were unearthed in recent years in digging the foundation of the Carcajou clubhouse, on the northwest shore of Lake Koshkonong. These were full length burials. They were unaccompanied by implements.

Milwaukee County

In Milwaukee several Indian burials were disturbed in former years in removing gravel and earth from the corner where the Essex flats are now erected, at Ninth and Wells streets. A grooved stone axe found here in 1886 is in the collections of the Milwaukee Public Museum. Indian bones were removed from a gravelly hill formerly located north of Burleigh, near Fourteenth street, in Milwaukee. Other burials were disturbed by graders near the intersection of Walnut street and Island avenue. These were buried at a depth of 2 to 2½ feet below the surface of the soil. The crania are preserved in the Milwaukee museum. Burials were also encountered in a gravel pit on what was formerly known as Old Distillery hill, at the south end of Eleventh avenue, on the north bank of the Kinnikinnick River. Other burials were found at different times in Austin's gravel pit at the southern limits of Milwaukee, near the old Chicago Road. This locality is in the NE ¼ of Section 17, Lake Township. On the W. Ristow place on the bank of the Root River, in the W ½ of the NE ¼ of Section 35, Greenfield Township, several burials were found in a gravel pit. These were in a flexed position.

Previous to the year 1903 six or more Indian burials were unearthed at different times in a gravel pit on the Daniel Brewer farm at Howards Prairie, in the southern part of Franklin Township. Accompanying these were a large number of bone beads, two socketted copper spear points, broken flint implements and two small earthenware vessels.

On November 14, 1903, Mr. H. P. Hansen, while working a gravel pit on the Bradley farm, on the upper Milwaukee River, unearthed the bones of a human skeleton and several flint implements (knives?) which accompanied it. This was a shallow burial. In recent years a burial was also unearthed in a gravel pit near the site of the old Bender grist mill in the upper Milwaukee River locality formerly known as Indian Prairie.

Notable discoveries were made in a gravel pit on the Charles Miller (old Peter Leser) farm at Beloit Corners in the SE ¼ of Section 18, in Greenfield Township. In this pit Indian remains were at different times disinterred. The earliest of these burials were disturbed in 1877 by men hauling away earth from an excavation 12 to 15 feet deep. At this time the bones of eight human beings which had been buried in an "upright" position and a considerable number of copper and several flint implements were found. In the Milwaukee Public Museum are a series of five fine canoe-shaped copper crescents and a large copper axe found at this time. The largest of the crescents is 10 and the smallest 2½ inches long. A fine salmon-colored flint ceremonial knife, which was also found, is nearly 15 inches in length and 3½ inches wide at the widest part of its blade. It weighs 15 ounces. In addition to the specimens in the museum a number of copper heads, several stone axes and other implements were found in this pit.

Manitowoc County

In Manitowoc human remains have been unearthed in a number of places in leveling knolls for the construction of streets and the erection of buildings. Several of these burials are reported to have been accompanied by flint implements. Two skeletons, full length burials, were found in June, 1913, in a gravel pit on the Winke farm in Manitowoc Rapids Township. No implements were found with these.

Oconto County

A copper crescent, a large copper sickle or sword-shaped implement, a copper banner stone, a copper chisel and two copper spear points were found by Willie B. Doty, between the C. & N. W. and C., M. & St. P. railroad tracks at Oconto, on October 1, 1899. The bones of a burial which these implements accompanied were discolored by the copper. The large sickle-shaped implement, the only one of its kind as yet found in Wisconsin, lay near the skull; the banner stone, also a rare specimen, at the feet of the skeleton and the chisel at its side.

This burial was in a sand and gravel ridge, partly graded away, which was being removed to obtain filling for a new

depot site. These implements are among the treasures of the Henry P. Hamilton collection in the State Historical Museum.

According to Mr. Hamilton, who personally investigated this find, another burial previously unearthed in this same ridge, was accompanied by two copper crescents, a double-bitted copper axe and other copper implements.

Outagamie County

A burial, accompanied by two large copper spear points, was unearthed in a gravel pit on the O. G. Lord property, one mile east of Kaukauna. At Appleton burials have been disturbed in the gravel knolls. Indian bones were encountered in digging a trench through a gravel knoll in the SW ¼ of Section 16, Center Township. Several skeletons were found in a gravel pit in Section 3, Clayton Township. A number of skeletons have been disinterred from a hill on the Wolf River bank, in Section 20, Bovina Township. Here stages of high water have frequently exposed human bones.

Ozaukee County

In a gravel pit located one-half mile south of the C. & N. W. R. R. depot at Port Washington there was unearthed in recent years a deposit of Indian implements consisting of one gray flint and three larger white flint ceremonial knives, a blue hornstone barbed spear point of medium size, a large flat-stemmed copper point and a number of chipped flint points. These were found by a telegraph lineman who had dug a hole for a pole. Several of the specimens are in the Milwaukee Public Museum collections. Several Indian burials have been found in this pit.

The late Wisconsin collector, Mr. W. H. Elkey, reported to the Wisconsin Archeological Society in March, 1911, on the finding of seven quartzite knives, twenty flint arrow points, two large spear points and a copper chisel with burials in another gravel pit at Port Washington. Some of these were flexed burials.

At Stonehaven burials were up to 1906 occasionally found in removing soil in quarrying operations. A stone pipe and flint arrow points were found with some of these.

Portage County

In July, 1903, three Busycon shells were found in the digging of a basement for a barn on the F. D. Turner farm, in Belmont Township. They were buried in the sand and gravel at a depth of three feet below the natural surface of the ground. Near the shells were three extended human skeletons "more or less complete," and with the bones in a fair state of preservation.

Racine County

In a gravel knoll on the William Haas farm, in Section 23, Caledonia Township, Dr. P. R. Hoy found three Indian graves. These were partly exposed on the high bank overlooking the Root River. Three skeletons were found here, two being those of adults and the third that of a child. The graves of the adult Indians were situated ten feet apart and were about sixteen inches below the surface of the soil.

In these graves Dr. Hoy found copper beads, nearly all of which were badly oxidized. Some other copper specimens had nearly disappeared. Each of the graves contained pieces of broken pottery vessels which contained red paint. The leg bones of deer were in each grave. In the child's grave were a few glass beads. Several other burials are reported to have been afterwards found in this knoll.

Sauk County

Dr. A. B. Stout reported in 1906 on the finding of a skeleton in a gravel knoll located near the bend of the Baraboo River, in Lyons, at Baraboo. This burial was made in a grave only a few inches below the natural surface of the knoll. It was not accompanied by any implements or ornaments.

Sheboygan County

In his report on the Indian history and remains of this county, published by the Wisconsin Archeological Society in August, 1920, Dr. A. Gerend gives the following account of some burials found in gravel knolls in the city of Sheboygan:

"Probably the most interesting aboriginal vestiges disclosed in the main portion of the city, as far as the writer has been able to ascertain, were found while levelling the triangle enclosed by Ninth, North Water, and Virginia streets. This triangle is at present a very pretty lawn-covered open ground on which are shade trees and flower beds. It is situated on top and near the edge of the high bluff overlooking the Sheboygan river and the west side of the city. While reducing the higher levels of this ground it is said that between twenty and thirty skeletons were found buried in shallow pits. The edges of the pits could be readily distinguished from the surrounding soil, according to the assertions of some who witnessed the excavations made. Some of the skeletons were found lying horizontally, or flexed in a squatting posture; others were disposed on top of one another.

"When these burials were discovered, about twenty-five years ago, the news rapidly spread through the city. The writer also hurried thither and remembers seeing many bones that had been unearthed. Some of the skulls, arm and leg bones were colored green, being in immediate contact with veridgris-covered copper artifacts. These were found on and beside the skulls and bones and included spear points, knives, and large slender crescents. It is said that masses of copper weighing from five to six pounds were also found. These copper implements were badly corroded and thickly covered with verdigris. In the writer's cabinet are a crescent and two copper arrow heads found here. The blade of the larger one is spatula-shaped with a flat elongated stem. The smaller is flat and of an irregular shape.

"A socketted spear or spears were also found. The writer could not ascertain the actual number of copper specimens found as they were carried away while the excavation was in progress.

"It is said that three crescents were obtained. One large crescent was later acquired by the Wyman brothers for the Field museum at Chicago.

"The skeletons lay at a depth of probably 3 to 4 feet.

"No stone implements were discovered to the writer's knowledge.

"Some local collectors worked until after dark and by the aid of lanterns found some specimens.

"At the corner of Ninth street and Center avenue, while excavating the cellar for the Schreier residence, Indian skeletons were unearthed.

"At Ninth street and New York avenue (northeast corner) over 40 years ago a pit burial was exposed and several skeletons found. Mr. John Gerend was present at the excavation.

"A similar pit burial was disclosed many years ago at the corner of Ninth and Ontario avenue. Besides several skeletons a very handsome copper spear was found here.

"While excavating the site for the Government building and post office a skeleton was unearthed. With this were found ornaments of modern Indians such as glass beads and other trinkets.

"While digging trenches on North Sixth street for laying water pipes a fine copper spear was obtained."

A socketted copper spear point in the H. P. Hamilton collection was found in 1911 in a gravel pit on the Richard Dreitzke farm in Mosel Township. It accompanied a flexed burial. A copper axe was found by David O'Neall during the digging of a gravel pit near Our Town, in the same year. A copper spear point was obtained in 1902 by Henry Barr in a gravel pit at a distance of about 1½ miles east of Sheboygan Falls. Both probably accompanied burials. These specimens are also in the Hamilton collection.

Waukesha County

In this county many Indian burials have been disturbed in digging in some of the numerous gravel deposits in various places.

In working a gravel pit on the Jacobson farm southwest of Delafield (NE ¼, Section 19), in Delafield Township, in about the year 1903, an Indian grave was exposed. Accompanying the interment in this grave, which was but a few feet beneath the surface, was a necklace of copper beads, bear claws and narrow curved copper pendants. Several other graves had been previously found in this pit. An Indian burial was found in about the year 1911 while removing gravel from a small pit on the Sullivan farm at Buena Vista, at the western end of Pewaukee Lake. With this burial no implements were found.

In 1850 a burial was exposed in a sand pit on the G. Hodgson farm in Section 11, Pewaukee Township. The bones were in a poor state of preservation. A large iron knife of a trade pattern was found with this burial. An Indian village site is located on this farm.

In grading a site for the construction of a new depot at Pewaukee in 1900, the C., M. & St. P. R. R. excavated in a gravel knoll a burial place which contained six skeletons, some

of which were full length and others flexed burials, according to the report of one of the workmen. With these were a number of copper and stone implements which the men divided among themselves.

In the year 1897 ten burials were disinterred in removing gravel from a knoll on the John Bolster farm in Section 22, Brookfield Township. The bones were in good condition. Accompanying these interments were an interesting series of implements. There were two black hornstone spear points, a quartzite knife, a copper awl, a copper spear point, a grooved stone axe, a pointed stone implement of unknown use, and ten flint arrow and spear points from 1 to 3½ inches in length. Other burials were afterwards disturbed here.

Indian burials were also found in removing gravel from a knoll on the Henry Reinder's farm in Section 27, Brookfield Township, on the highway from Blodgett to Elm Grove. Some were found in the year 1897. This knoll is located about 400 feet southeast of the farm house on this place. In about the year 1902 several skeletons were exhumed from a gravel knoll on the John Cushing farm about one-half mile north of Elm Grove, in Section 24.

In excavating a small gravel knoll on the east bank of Mill Creek, a short distance north of Little Muskego Lake, a human jaw bone and several other bones, a stone celt and several flint points were obtained. This is a former Potawatomi locality. Human bones were also found in a gravel pit, previous to 1907, on the John Schmidt farm, near Muskego Creek, west of Muskego Lake. In the cultivating of two gravel knolls on the John Schaefer farm, on the east shore of Muskego Lake, two Indian burials were disturbed. An iron knife was found with one of these, also a brass ring and other trade jewelry. A small red catlinite pipe of the common Micmac form was found with a burial in another gravel knoll on this farm. One of these knolls is on either side of the Tess Corners road. On the Rudolph Holtz farm in Section 13, Muskego Township, in the digging for the foundation of a barn on a knoll three Indian burials were uncovered. With these were found several iron spear points, a knife and some other iron implements. This occurred in about the year 1870.

Waupaca County

Four human skeletons were unearthed during the grading down of a hill in Section 16 of Little Wolf Township, in 1894. With these burials were a copper axe, a bone spear point and several hundred leaf-shaped flint and quartzite blades. This find was divided among the road gang employed in the work. Some of these specimens are in the H. P. Hamilton collection at Madison.

Winnebago County

The late Wisconsin archeologist and historian, Publius V. Lawson, reported the finding of burials in gravel knolls on the Blair and other farms at West Menasha, in Neenah Township. These were disturbed in digging gravel for road work. "These graves are usually at a depth of but a few feet beneath the surface. The bones lie in a horizontal position, the direction varying greatly." The Blair pit especially has produced a considerable number of copper and stone implements.

During the summer of 1902 human bones and a copper spear point were found.

In 1913 in the caving of a section of the wall of the Blair pit a group of copper implements and ornaments was exposed. These are in the H. P. Hamilton collection and include two copper crescents, a socketted copper spear point, two bevelled copper spear points, several conical copper arrow points and a copper perforator. The latter is pointed at either extremity and has a central projection or widening. Other implements and human bones were probably buried in the talus.

In this collection are two other copper crescents, found in this pit at another time and a copper axe found in a burial place in Cook's gravel pit.

A shell bead found with a burial in Cook's pit is in the State Historical Museum.

"From a pit near the [former location] of the 'Hill of the Dead' [Mr. Lawson] obtained in 1882, a dozen sherds of shell-tempered earthenware, several fragments of carved bone and a number of bone awls."

The gravel ridge in which these gravel pits occur extends from West Menasha across portions of the townships of Neenah, Vinland and Winneconne to Lake Butte des Morts.

Two or more burials were disturbed in removing gravel from a pit about one-fourth mile east of Piacenza, in Winneconne

Township. Many skeletons and some implements were disinterred at different times previous to 1903 in working a gravel pit on the Cook & Brown Lime Company property on the south shore of Lake Butte des Morts, in Omro Township.

THE CLIFF RUINS OF THE SOUTHWEST

W. A. Titus

In the late summer of 1911 business and pleasure in rather unequal proportions made it desirable for me to again visit the Pacific Coast region. Two or three years prior to this time I had become much interested in the ethnology and archaeology of that interesting prehistoric group of people whose ancient habitat centered about the only point in the United States where four states meet, and who, for lack of a more specific designation, are commonly called "the Cliff Dwellers."

My only knowledge of this region, its ruins, and its aboriginal peoples was such as I had been able to gather from books. This was valuable in a way and fascinating as well, but now that I must again cross the many miles of mountains and deserts and as time was not an urgent factor in the trip, I determined to proceed leisurely through New Mexico and Arizona; to visit some of the pueblos that are still inhabited, as well as the ruins of abandoned pueblos and cliff dwellings which antedate the Spanish occupation. Of these prehistoric peoples we know nothing except as we predicate certain phases of their daily existence on household articles, clothing and weapons that have been almost perfectly preserved in the dry cliff caverns where they lived all or a part of their time.

Aside from the annual reports and the bulletins of the Bureau of Ethnology, and a few excellent reports of expeditions to this region undertaken by universities and museums, the literature covering these ancient ruins and their former occupants is neither voluminous nor profound. Early explorers, who visited these deserted habitations, noted that in many cases the natural rock ceilings of the cliff houses were not high

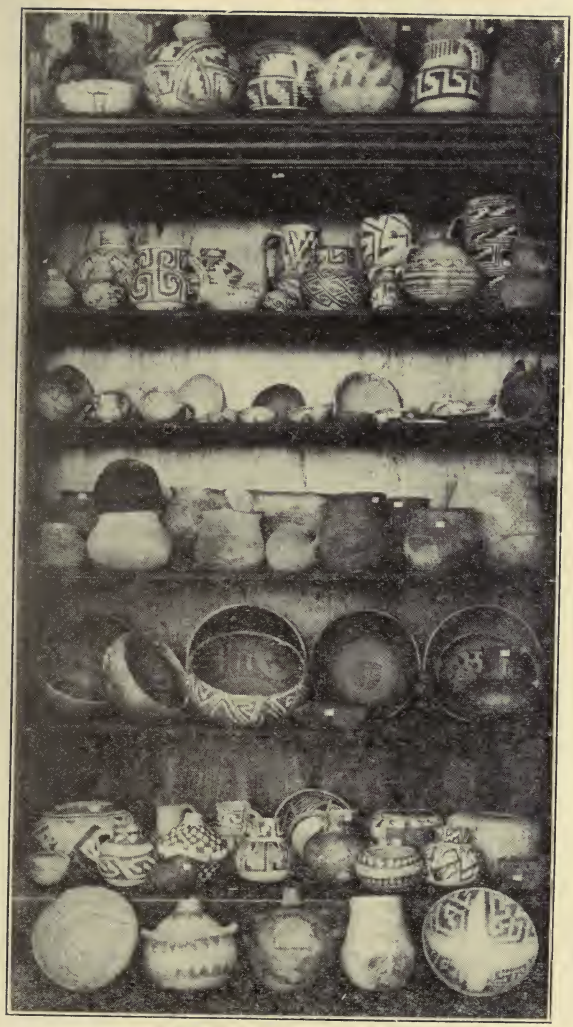
enough above the floor to permit a person of ordinary stature to stand erect. It was also noted that the doorways were very low, even where the ceilings or rock roofs were six or more feet in height. The inference was that a race of pygmies must have inhabited these almost inaccessible cliff and cave houses. Much popular misinformation on the subject was disseminated a few years ago through the newspapers, and even yet one may see occasionally fallacious statements about these ruins, readable and popular, but wholly unsupported by scientific data.

Today the best authorities on the subject agree pretty generally that the "cliff dwellers" were the ancestors of the present day pueblo dwellers; that they were a race of normal stature, who occupied their sometimes cramped quarters in the almost inaccessible cliff walls only in times of great danger as when attacked by the fierce plains savages from the north and east; and that in times of peace, they dwelt in the now deserted pueblos of the valleys, many of which are still imposing in their ruined condition. It is impossible within the limits of this article to give the many reasons for this conclusion. Skeletal remains from the cliff dwellings and from the old pueblos prove that the occupants of both were of the same stature. Pottery and weapons from both classes of ruins show a similarity of culture that is significant.

That these ancient peoples were well advanced toward civilization is indicated by the remains of cloth and matting which they wove, the mosaics of turquoise which they fashioned, and the great variety of ceramic wares which approach true art, both in form and in decoration. Their houses were built either of stone or of adobe; in either case they were strongly and durably constructed, and in many instances the architectural design is pleasing. With no other tools than stone axes and stone mauls, they built structures of roughly dressed stone, sometimes five or six stories in height and of enormous lateral dimensions. Some of these ruined buildings, of which Pueblo Bonita is a type, must have housed from 500 to 1,000 people. Even the present inhabited pueblo of Acoma, with only two buildings used for residence purposes, has or has had, within the period of American settlement, as many as 1,000 people housed in its two elongated three-story structures. It

is interesting to note that Acoma is the oldest continuously inhabited village within the United States. It is situated on a mesa of a few acres in area 500 feet above the plains which surround it on all sides. The walls of the mesa are almost perpendicular, and only a winding foot-path along the side of the cliff furnishes access to the flat summit where the great stone houses have been erected from material carried entirely by human beings from the plains below. For a water supply, great reservoirs have been chambered out in the solid rock. These are filled by the winter rains, and throughout the long dry summers these pools furnish drinking water for the high-perched villagers. The water in the reservoirs becomes covered with a thick green scum, but no harm seems to come to the people from its use. Nearly 400 years ago when the Spanish explorers first came to New Mexico they found Acoma pueblo practically as it is today. Then as now, the villagers controlled the plains on every side, and each morning they came down from their secure retreat and cultivated their lands and tended their flocks and herds. Today they raise thousands of burros which they use as beasts of burden and sell to the outside world as opportunity offers. I was so fortunate as to be able to visit this scenic pueblo, and after paying a price to the head man, I was permitted to train my camera on the village and its people without further restriction.

For the visitor who would see the Pueblo Indians of today in their native villages or who would ramble through the ruined habitations of centuries ago, the vicinity of Santa Fe and Albuquerque offers the maximum of interest for the amount of time and money expended. A majority of all the inhabited pueblos are in this neighborhood, and within a half or three-quarter-hour ride from the nearest railroad station. Nor is the region without its impressive ruins, many of which have been excavated by the Archaeological Society of New Mexico and the School of American Research at Santa Fe. Adjacent to Santa Fe may be seen the inhabited pueblos of San Juan, Santa Clara, Tesuque, Taos, Zia, Jemez, San Ildefonso, Nambe and others, while the canyons from which emerge the head streams of the Rio Grande everywhere give evidence of an older occupation. In the neighborhood of Albuquerque



Cliff Dweller Pottery
W. A. Titus Collection
Plate I.

are the picturesque and well-kept pueblos of Isleta, Laguna, and Acoma. I cannot speak too highly of the cordiality of the natives in Isleta and Laguna. They are kindly and hospitable to visitors, although their patience must be sorely tried at times by inconsiderate white people with a preponderance of idle, aimless, and impertinent curiosity. Of Acoma, I have already spoken. Its people are less friendly, at least until one has established some reason for being among them. A few dollars distributed among them will usually bring about a better understanding. If one has the time, a visit to Chaco Cayon will amply repay him. Throughout this northwestern portion of New Mexico one finds everywhere evidences of a numerous population in the centuries that are gone. Farther to the north and into southwestern Colorado, one comes to the Mesa Verde National Park, where is found the architecture par excellence of the old cliff dwellers. Many-roomed houses with round towers and square towers stand silent and deserted in the caverns of the precipitous cliffs, far above the valley levels, and seemingly inaccessible. When Richard Wetherell first discovered and entered these deserted castles, he found in them a wealth of material that had entered into the daily lives of a contented people. Much of this was sold to curio hunters and thus scattered about the country. The large collection which I brought together and later presented to the State Historical Society contains considerable material from these ruins as well as some excellent specimens from Chaco Canyon.

In Arizona as in New Mexico one finds both cliff ruins and lowland pueblo ruins. Most of the beautiful pottery from Arizona has been found in the cemeteries connected with the pueblo ruins. These semi-civilized tribes honored their dead by burying with them the best of the household vessels, to which were sometimes added weapons, metates, and effigies. To name specific localities where these remains have been found would be a hopeless task because ruins have been found at short distances from each other over an area of thousands of square miles. The wide range of these prehistoric remains is shown in a small way in the collection which I assembled. They represent widely scattered localities in New Mexico, and

Arizona, as well as many specimens from southwestern Colorado and southern Utah. I have made no trips into southern Utah myself, and the excellent material that I gathered from that region came to me largely as a result of the kindly interest of Dr. Levi Edgar Young of the University of Utah.

One of the fascinations of collecting Southwestern material is the fact that no two specimens of pottery are ever exactly alike. Out of a thousand pieces, each shows originality in design and execution. Another interesting feature is that when taken from the graves, the pottery specimens are usually encrusted with a heavy lime deposit that wholly conceals the design until the article is given a hydrochloric acid bath. When the decoration appears, the operator knows that he is the first white person who has ever seen it.

The Pueblo Indians, past and present, are interesting because they are different. Physically they bear little resemblance to the plains Indians. The Pueblo Indian is inclined to be fat and heavy, the plains Indian or the forest Indian is usually angular and muscular in build. The Pueblo Indian is kind and gentle in manner, has always preferred peaceful pursuits rather than warfare, and has engaged in conflict only in defense of his desert home. Then again, he is self-supporting in a desert environment where no white man could exist by his own unaided efforts to raise food. Of all the Indian wards of the United States, only the Pueblos and the Navajos, jointly inhabiting a region that appears hopeless for agriculture without irrigation, have indignantly spurned any suggestion of government charity. They seem to know where the water is close to the surface under the hot and yellow sand, and there they plant their corn, their beans, and their peach trees. They have grants of land which were confirmed by our government at the close of the Mexican war, and they are happy and contented in their isolation. Let us hope that the greed of the white men may never seek to dispossess them.

WISCONSIN ARCHEOLOGICAL NOTES

An expedition of the Milwaukee Public Museum which included among its members Dr. S. A. Barrett, director of the museum, and Mr. George A. West, president of its board of trustees, has returned from Isle Royale, where its members have been conducting investigations in the old Indian copper mining pits and collecting material for a museum group. Mr. West states that four old French mines, worked by the Indians under French direction, were located. In one aboriginal pit 42 broken stone mauls were found.

The Oshkosh Public Museum has been moved to its new home in the former Edgar P. Sawyer mansion, on Algoma boulevard, Oshkosh. Its large collections are now being installed by a committee of members of the Winnebago County Archeological and Historical Society. Mr. G. E. Williams is chairman of the museum board, Mr. Ralph N. Buckstaff, secretary, and Mr. Arthur Kannenberg its treasurer. Mr. V. D. Nevins and Mrs. E. E. Rogers are members of the board. Mr. Nile Behnke, Mr. George Overton and others are assisting in the installation of the collections. The museum expects to open its doors to the public in September.

The State Historical Museum has secured from Mr. Carl F. Schondorf of Paterson, New Jersey, the investigator, a very interesting series of wampum articles, blanks and shell rejectage from the site of the old Campbell wampum factory on the estate of Mrs. Alonzo Campbell, on the west shore of Pascack Creek, at Park Ridge, Bergen County, New Jersey. When first seen by the investigator this site was marked by a heap of conch shell fragments. This was about 20 feet in diameter and two feet in height and extended one foot below the soil. It contained about five wagon loads of conch shell fragments. About 5,000 specimens of wampum in various stages of manufacture were recovered in the excavation of the heap.

Wampum was manufactured here for the Indian trade by four generations of the Campbell family. They supplied the American Fur Company and other fur trading companies with wampum and shell ornaments. The manufacture of these was carried on by them from the year 1775 until the time of the death of General Custer in 1876. Abraham D. Campbell began the manufacture of wampum beads, hair pipes, moons and other ornaments from the conch shell. It was mostly made by hand, but in 1850 a member of the family invented a machine for drilling the six-inch and longer hair pipes. There being no longer any demand for shell articles the factory was closed in 1876.

The conch shells were brought from the Island of Santa Cruz, in the West Indies in trading vessels. They were loaded into sloops which sailed up the Hackensack River to the head of navigation and from there brought to the Campbells in wagons to Pascack. The Bross and Bell families, residing in Bergen County, made black and blue wampum from the shells of the quahog or common ocean clam. This they sold to the Campbell family. The Campbell family made white wampum from the conch shells, and a small amount of the black wampum.

Mr. Schondorf's large archeological collection of about 40,000 specimens was last year purchased for a museum organized in connection with the public library at Paterson.

The 1924–25 committee on State Archeological Surveys of the Division of Anthropology and Psychology of the National Research Council, Washington, D. C., has been appointed by Dr. Albert E. Jenks, chairman of the division. The full personnel of the committee is as follows: Dr. Kidder, chairman; Peter A. Brannon, Charles E. Brown, Amos W. Butler, Roland B. Dixon, Frederick W. Hodge, Charles R. Keyes, C. W. Mills, Henry M. Whelpley, Marshall H. Saville and Clark Wissler.

In Tennessee progress is being made toward the organization of a state archeological society, and the conducting of a state archeological survey. On July 26 Mr. P. E. Cox of Franklin was appointed state archeologist, and now has these matters of organization in hand. It is the intention of the state archeologist, when these plans are perfected, to invite representatives of other state archeological societies to attend the organization meeting.

Archeological investigations are being continued by members of the Wisconsin Archeological Society in a number of places in the state. Mr. J. A. H. Johnson has located some additional mounds and some fine garden beds in Barron County, Mr. S. W. Faville, an unrecorded mound group in the Mud Lake region, in Dodge County, and Mr. C. E. Brown and Mr. A. O. Barton have examined some Indian camp sites in the Wisconsin River region near the Wisconsin Heights battlefield, in Dane County. Mr. Town L. Miller has made important discoveries near Kingston in Green Lake County and the Messrs. George Overton and Arthur Kannenberg in Winnebago County.

From Mr. Earl Sugden there have been received field notes on a mound and village and burial sites in Henrietta and Rockbridge townships in Richland County. His archeological collection has been placed in the public museum now being organized at Richland Center. Many other members of the society are expected to report on the results of archeological investigations before the close of the season. Every member is invited to assist in this important work.

Persons interested in the welfare of the American Indian are invited to become members of The American Indian Defense Association, Inc., whose offices are at 33 West 42nd Street, New York. The object of this association, of which Mr. Irving Bacheller is president, is to secure to the American Indian just treatment from the government and people of the United States.

Madison members of the Wisconsin Archeological Society and their families and friends ate a picnic supper together on John Muir knoll on the university campus on Wednesday evening, July 30. They afterward attended in a body the annual summer session folklore meeting on Lincoln Terrace. This was conducted by Secretary Brown, about two hundred students and other persons being present. The story telling this summer was by lady members of Miss Carol McMillan's classes. These were well selected and very well told.

The Indiana Historical Commission has published an interesting bulletin entitled "Archeological Survey of Lawrence County." Its author is Mr. E. Y. Guernsey of Bedford, Indiana. Mr. Guernsey is an enthusiastic archeologist and his report is printed by the commission to serve as an example to Indiana archeologists desirous of assisting in the state archeological survey. The commission has also issued another valuable bulletin on "Historical Markers in Indiana." This is a revised edition of a similar bulletin issued in December, 1921. The present report lists 461 markers distributed in 82 counties, an increase of 248 markers since 1921. Both bulletins contain a number of illustrations. The Indiana History Bulletin (extra number) is devoted to a publication of the "Proceed-

ings of the Fifth Annual Indiana History Conference.'' This is an especially interesting issue containing valuable information on Indiana archeology and history, state and county historical museums and the teaching of state and country history.

Dr. M. M. Quaife, former superintendent of the Wisconsin Historical Society, has become the managing editor of The Mississippi Valley Historical Review with an office at the Detroit Public Library.

The thirty-fourth annual report of the American Bureau of Ethnology is devoted to ''A Report on Prehistoric Objects from the West Indies in the Museum of the American Indian (Heye Foundation),'' by J. Walter Fewkes. This fine volume every Wisconsin archeologist should endeavor to secure.

The University of California has issued two new publications, ''Wappo Texts (First Series),'' by Paul Radin, and the ''Phoebe Apperson Hearst Memorial Volume,'' issued in memory of this generous benefactor of anthropological science in California. Among the well-known contributors to this volume are Dr. Franz Boaz, Pliny E. Goddard, A. L. Kroeber, Robert H. Lowie, John A. Mason, Edward Sapir and T. T. Waterman.

MICHIGAN STATE ARCHEOLOGICAL SOCIETY NOTES

Mr. Harry L. Spooner of Fremont is engaged on an archeological map of Newaygo County. He is also investigating a group of mounds in Lake County, just north of the Newaygo County line, and another group of seven mounds near the county line in Oceana County.

Mr. Harry McConnell of Walloon Lake has furnished valuable data relative to the exact location in the city of Grand Rapids, of the Detroit trail and the St. Joseph trail.

Through the activity of Mr. Chas. E. Morrison of Williamston, chairman of the committee on Public and Private Collections, the Michigan society now has a list of eighty of the archeological collections of the state. It is of prime importance that all collections should be listed, for an inventory of their contents is needed to assist in archeological research.

The Woman's Study Club of Climax, on May 30, erected a boulder marker bearing a bronze tablet on the site of the elliptical earthwork found by the early settlers of Climax. This work was surveyed by Frances Hodgeman at an early date. It was 330 feet long and 210 feet wide. The dedication address was given by Prof. Smith Burnham of Kalamazoo. Mrs. T. E. Sinclair is president, and Mrs. Melvin Scramlin is chairman of the historical committee of the club. The monument was financed under the law introduced in the legislature by Chas. M. Weissert, which provides that county supervisors may appropriate a limited sum of money for markers for historical sites.

Mr. Fred Dustin of Saginaw is continuing the collection of data for a map of the Saginaw District. Through the courtesy of the University Museum he has been furnished with large scale maps of the region. Mr. Dustin's work is exceptionally difficult, as the valley of the Saginaw has, within historic times, witnessed three migrations of the Indian and doubtless several others occurred in prehistoric times.

Mr. Donald O. Boudeman of Kalamazoo has one of the finest archeological collections in the state. In May this collection was visited by President Geo. R. Fox, and in June by Dr. W. B. Hinsdale of the Michigan University Museum, a trustee of the society. Dr. Hinsdale and his assistant, Mr. Vreland, photographed many representative specimens. These photographs are to be used in illustrating his report on Michigan archeology. Dr. Hinsdale has visited many sections of the state this summer and has collected a great amount of information relative to the archeology of Michigan. In addition to completing the collection of illustrations for his new book, which will be published as a University of Michigan bulletin, he expects to complete a survey of the earthworks in Missaukee County. These earthworks and many Indan pits are in Aetna Township, twelve miles southeast of Lake City.

In July Mr. Henry Ford gave to the university museums the exclusive use of a Ford touring car for the department of archeology. Dr. Hinsdale will have next year a full time assistant. The Alumni Association has made a very liberal monetary grant to Dr. Hinsdale for work in archeology. It is believed this grant will be annual.

The Coffinbury manuscript on Michigan archeology was discovered in the Kent Scientific Museum at Grand Rapids. Mr. H. L. Ward has performed a great service to the archeology of the state by making this manuscript available. It has been loaned to the university museum.

Dwight L. Coffinbury was born at Lancaster, Ohio, in 1807. In 1836 he became a member of the Civil Engineers' Corps of Ohio. In 1844 he went to St. Joseph, Michigan, four years later removing to Grand Rapids, becoming the first civil engineer of that city. From that date until the Civil War he surveyed state roads and lands. Being interested in Indian remains, he carefully noted all he saw.

He was one of the early members of the Lyceum of Grand Rapids. This was superseded by the Lyceum of Natural History which later became the Kent Scientific Museum. Mr. Coffinbury served as president of this society and for years was the chairman of its committee on archeology. He made many explorations, collected many valuable specimens and kept scientific notes on his discoveries. Many of his specimens now are in the Peabody Institute. His contributions to Michigan archeology rank with those of Schoolcraft, Whittlesey and Harlan I. Smith. Mr. Coffinbury died in 1889.

Geo. R. Fox, the president of the Michigan Society, spent some weeks in the late winter exploring mounds in Louisiana. The results were embodied in a paper given before the recent annual meeting of the American Anthropological Association at Ann Arbor.

H. C. Shetrone of the Ohio State Archeological Society gives credit to Michigan for having furnished the largest piece of native silver ever taken from a mound in the United States. This was found near Grand Rapids. The results of the opening of this mound are given in the Coffinberry manuscript.

The April number of the Michigan History Magazine gave to the Michigan Society nearly eight pages of space. The constitution is printed in full, with an account of the organization meeting held in Lansing in January, 1924. The July number will contain an account of the spring meeting held at Ann Arbor.

According to present plans, the summer meeting of the society will be held in Grand Rapids, probably about August 30th. One day may be spent in a visit to mound locations or other evidences of aboriginal occupation near Grand Rapids.

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Milwaukee, Wis.

Incorporated March 23, 1903, for the purpose of advancing the study and preservation of Wisconsin antiquities.

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SESSIONS

These are held in the Lecture Room in the Library-Museum Building, in Milwaukee.

During the months of July to October no meetings are held.

MEMBERSHIP FEES

Life Members, $25.00 — Sustaining Members, $5.00

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Junior Members, $.50 — Institutional Members, $1.50

All communications in regard to the Wisconsin Archeological Society or to the "Wisconsin Archeologist" should be addressed to Charles E. Brown, Secretary and Curator, Office, State Historical Museum, Madison, Wisconsin. Dr. W. H. Brown, Treasurer, 1240 Second St., Milwaukee.

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Flint Spearpoint
Wisconsin Type

The Wisconsin Archeologist

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Vol. 3 MADISON, WIS., SEPTEMBER, 1924 No. 4
New Series

AN INTERESTING TYPE OF FLINT SPEARPOINT

C. E. Brown

If the distribution in the United States and Canada of some of the rarer or unusual forms of flint points could be carefully worked out by archeologists the interest in the collection and the study of Indian stone artifacts would be greatly increased. However, the time for the undertaking of such researches is not yet ripe. But very few states are as yet very deeply concerned with the investigation and preservation of their archeological history, and the comparatively small number of active and competent archeologists in our country are quite generally engaged in the solving of larger and more important problems. An investigation of the origin and distribution of a single type of flint implement might require a knowledge of the contents of hundreds of private and public collections. In past years both Mr. Gerard Fowke and Dr. Thomas Wilson, government archeologists, published classifications of Indian stone implements with information concerning their distribution, but this information is based largely, or wholly, upon the contents of the collections of the United States National museum and although most helpful is naturally quite incomplete. It would be very interesting to know, if possible, just where some rare or unusual type of flint implement may have originated and how widely it was afterwards dispersed throughout the country through the channels of aboriginal trade. Also to know what other tribes or aboriginal centers may have copied the type and engaged in its manufacture. To work out the history of some of the very common and widely distributed forms of flint implements might be a much greater undertaking.

It must be evident to every studious collector of flint arrow and spearpoints that certain forms are very numerous in their

own as well as in other states. In some cases their distribution appears to be almost countrywide. They have been collected in numbers from many former Indian camp sites and are to be seen in greater or less numbers in nearly every collection. On the other hand, some graceful and beautiful forms appear to be of very rare occurrence in any state, but examples of these have been found in various states or in many states.

A type of flint spearpoint, a specimen of which is shown in the frontispiece of this issue of THE WISCONSIN ARCHEOLOGIST, is an example of one of these rare and yet widely distributed forms. These very graceful and attractive points, it may be noted from this illustration, are stemmed and are without barbs. The edges of their rather long blades are slightly or quite pronouncedly concave. Their shoulders are either straight and at right angles to the stem, or slope upward. The stem is generally rounded.

Only a very small number of examples of these generally very symmetrically fashioned points have been found in Wisconsin, or, so far as the writer has been able to learn, in any of its surrounding states. It is needless to say that the few specimens found are prized by the museums and collectors who possess them. Descriptions of some of the Wisconsin specimens may be given:

A specimen of this type of spearpoint in the State Historical museum (A1348) was obtained from an Indian mound in Juneau County. The exact locality is not known. This fine point is made of pink flint speckled with minute dark red specks. Its length is 5⅛ inches and its width at its shoulders 1¾ inches. The edges of its rather narrow, sharply pointed, blade are quite deeply concave. It has sloping shoulders and a short rounded stem.

In the Henry P. Hamilton collection, in the museum, are four examples of this type of point, the only ones obtained by their late owner during many years of collecting in this state. One of these was obtained in a district at a distance of two miles south of Monroe, Green County. This point (A1355) is made of white flint having a light flesh tint. The edges of its blade are concave, its shoulders square and its base rounded. Its length is 5⅛ inches and its width across the shoulders 1 5-16 inches.

A smaller specimen (A1472) and of the same shape is made of white flint. It comes from Lake Geneva. Its length is 4¼ inches and its width across the shoulders 1⅜ inches.

A third specimen (A1498) comes from Madison. This point is made of blue hornstone. Its length is 5¼ inches and its width across the shoulders 1⅞ inches. Its blade edges are concave, its shoulders square and its short stem rounded.

The fourth example (A4646) comes from Benton, La Fayette County. It is made of pink flint with dark red spots. This large specimen is 6¼ inches long and measures 2½ inches across its shoulders. The edges of its blade are only sligthly concave and its shoulders slope upward from its broad, rounded stem.

In the Hall collection in the state museum there is a specimen from the Four Lakes region at Madison. It is made of light gray flint. Its length is 3⅞ inches and its width across its straight shoulders 1⅝ inches. Its narrow blade has the very unusual feature of concave, bevelled edges. Its stem is rounded.

In the collection of Mr. J. P. Schumacher at Green Bay is the largest known example of this type of spearpoint. It is made of white flint and is 7½ inches in length and about 3¼ inches in width across the straight shoulders of the blade. The edges of the broad blade are concave and its rounded stem very short for so large a point. Its length is only about ¾ of an inch and its width at the base of the blade ⅞ of an inch. This fine point was found in Howard Township, Brown County.

Another large and fine specimen, formerly in the W. H. Ellsworth collection at Milwaukee, and probably now with that collection in the Logan museum at Beloit College, came from Boltonville, Washington County. It was made of white flint. It was 7 3-16 inches long and measured 2 9-16 inches across its broad shoulders. One edge of its blade was slightly concave, the other straight. Its shoulders sloped upward and the short stem was peculiar in being nearly triangular in its shape.

In the F. M. LeCount collection at Hartford there was a specimen which had been found at that place in Washington County. It was made of white flint. The edges of its blade were concave, its shoulders sloped upward and it had a rounded stem. Its length was 5¼ inches and its width across its shoulders 1 11-16 inches.

The nine specimens are all of the examples of this interesting

type of flint point at present known to have been found in Wisconsin. The distance separating the Brown County specimen from the one found in Benton, Lafayette County, is about 180 miles.

Fowke* figures this type of spearpoint and mentions the presence of examples in the U. S. National Museum from Union County, Illinois, two from Savannah, Georgia, and others from South Carolina, North Carolina, West Virginia and eastern Tennessee.

Wilson† figures an example from Kingston, Rhode Island.

SOME CURIOUS USES OF INDIAN MOUNDS

T. T. Brown

The Wisconsin Archeological Society estimates the number of Indian earthworks formerly located in the state at about fifteen thousand, a number larger than that found in any other state east of the Mississippi. In the past half century a very large number of these interesting remains of the early red inhabitants of the state have been destroyed. The earliest settlers of the Wisconsin prairies and woodlands put some of the mounds, the significance and historical value of which they did not understand, to various curious and interesting uses.

At Menasha Dr. Increase A. Lapham found some of the white settlers burying their dead in Indian earthworks. "They did not scruple to dig up the Indian skeletons to make room for the departed of a more civilized race. This was the city's first cemetery. In other places mounds were used for burial places before regular cemeteries were laid out. On the upper campus of the state university, at Madison, the early settlers of the future capital city interred their dead, in 1839, in graves dug by the side of a prehistoric Indian earthwork built by the redmen to represent the water spirit, one of their principal deities.

The building of houses and barns on mounds was a quite common practice of first settlers. In lower Prairie du Chien, where mounds were once numerous, the cottage homes of some French settlers were perched on the tops of Indian mounds.

*Stone Art, 13 Ann. Rep. Am. Bu. Ethno., 153.
†Arrowpoints, Spearheads and Knives of Preh. Times, 1897 U. S. Nat. Mus. Rep., 918.

This served to elevate them above the high water of the Mississippi river in time of floods.

There is at least one instance of the use of a mound as a temporary dwelling. On the early Heg farm in the township of Norway, in Racine County, the father of Col. Hans Heg, in about the year 1842, excavated a mound, boarded up the sides, built a roof on top and thus constructed a comfortable one-room house. The family lived in it for a year. Fourteen skeletons are reported to have been removed from this earthwork. In the same locality another burial mound was used by a family for a root cellar. In Winnebago and some other counties some mounds were used for similar purposes. On Oregon street, in Madison, several round mounds of a group now destroyed, were partially excavated, a wooden structure built within them, and the earth again heaped over this and this structure used by a railroad construction crew as storage places for blasting powder. Some years later a government anthropologist visited these mounds and prepared a plat of the group. Not learning of the uses to which these two tumuli had been put they appear in the report which was afterward published as horseshoe-shaped earthworks.

Some farmers appear to have had the idea that mounds were erected to serve as convenient places for the burial of the bones of dead cows and other stock. Others which had been excavated by local relic hunters became repositories for the old iron and other farm junk. Dr. Lapham in the fifties found a mound which a well-meaning resident of Fox Lake had converted into a flower bed with the purpose of thus preserving it. Both the mound and its flower bed have long since disappeared. There are other examples of such use of these ancient landmarks. One early settler is reported to have buried a box containing money in a mound. Later, forgetting just where he had buried it, he was forced to dig in a number of mounds in the group near his home before he recovered his hoard. Not a few mounds as well as Indian graves were rifled by early physicians to obtain skulls or skeletons for their offices.

Both the Winnebago and the Potawatomi during early days of white settlement continued to bury some of their dead in shallow graves in the surfaces of mounds which their own ancestors or other tribes of forest folk had constructed probably

centuries before. This may have been a relic of their own former mound building customs. Lapham found recent Indian graves on mounds in the Buffalo lake region, at Milwaukee, Waukesha and elsewhere. At the former place some of these dead had been interred in a sitting position on the tops of mounds and the graves protected with an enclosure of pickets. Elsewhere a pyramid of horizontally laid logs protected the grave from the depredations of prowling dogs or wild animals. Archeologists in their explorations have frequently encountered these intrusive burials. At Milwaukee and elsewhere plots of recent Indian corn hills sometimes ran over the mounds of earlier occupants of the site.

Many fine mounds have been destroyed to obtain black earth for the construction of a lawn, garden or flower bed or for filling in holes in a city yard. A once fine Madison mound group has been almost entirely destroyed in this way.

Numerous other causes have contributed to the destruction of these noble Indian memorials, some of which have withstood the destructiveness of the elements for centuries. In many instances the destruction of these ancient works in the farming of land, home and resort building and road construction, was wholly unnecessary. It is greatly regretted today by the persons responsible and by many other persons who would have profited educationally by their presence.

Despite the campaign of education conducted for years by the Wisconsin Archeological Society, by the women's clubs of the state, county historical societies and other organizations, the destruction of these records of the past still continues, though to a lesser extent than formerly.

Many of the tourist summer resorters, who are gradually occupying the northern lakes region, have never seen a mound in their own states and not appreciating their historical significance, frequently level and destroy them before they realize what they have done.

THE BOIS FORT CHIPPEWA

Albert B. Reagan

The Bois Fort Chippewa are known among themselves and sister tribes by the name Sugwaundugahwinninewug (men of the dense-wooded forest or fir woods). So far as the writer can learn by examining the records of the Bureau of American Ethnology they have received but scant notice from writers. They number between six and seven hundred and occupy lands allotted in severalty from a reservation formerly consisting of 107,519.42 acres surrounding the beautiful Nett Lake in northern Minnesota, though many of the tribe live on adjoining lakes and streams extending as far north as the Canadian line, where there is good fishing, hunting and trapping.

According to their traditions, they originated on the Atlantic seaboard, were created there by their chief deity Manabush. From there, with the other Chippewa, they journeyed to the Straits of St. Marie and Mackinac, where they sojourned many generations, as their expanding settlements spread out and enveloped the country in all directions. Then when the main body of that division of Chippewa moved westward to the head of Lake Superior in the vicinity of Shaugawaunukong, now La Pointe, Ashland County, Wisconsin, they passed northward around that lake and took possession of the dense fir woods to the westward. Encountering the Sioux, they routed them at Elbow Falls near Cheen, Minnesota. They then passed across Pelican Lake and Pelican Lake portage westward to Nett Lake, where the scared Sioux precipitately fled, leaving scarcely anything but their pictographs on Picture Island to bear witness of their having once occupied the region.

This driving out of the Sioux and the finding of the "stone pictures" have passed into a beautiful myth, as follows:

"The first people of our race who came to this region had been canoeing only a few minutes in Nett Lake when they came in sight of Picture Island, and, lo! it was swarming with a multitude of beings that were half sea-lion and half fish. On the approach of our people, these became panic stricken, and fleeing to the west side of the island, took to the water and swam with all speed across the lake. They then went up a little creek that enters the lake from the southwest. Reaching the head of

this stream and being pursued and caught as in a net, they dove down into the earth. And now the water bubbles forth from the place where they disappeared—a place still held sacred by our people (the Bois Fort Indians). On coming to the island the canoemen paddled around it and by the track of the muddied water, pursued the beasts across the lake and up the creek till they found where the earth had swallowed them up, as though they had been caught in a net. Since then we have called the lake 'Netor as-saba-co-na' (Nett Lake, that is, the lake with a net). When our people returned from the pursuit, they found these pictographs on the island. They are the writings of those half sea-lion, half-fish beings."

These Indians have many beautiful myths and traditions. They also have birch-bark scrolls covered with glyph-characters which are a record of their songs—a long step toward a written language. They have chiefs, sub-chiefs and head men. They also have medicine men and many medicinal fraternities, principal of which is the Grand Medicine Lodge. They are strong believers in a future life. They imagine that the "shade" (soul?), after death of the body, follows a well beaten path, leading toward the west, finally arriving in a country abounding in everything the Indian desires.

Before the coming of the white man they lived in birch bark wigwams and dressed in skins. Their food was fish, deer, moose and rabbit, wild fowls and wild rice *(Zizania aquatica)*, and principally still is.

Below are some of the writer's notes on these Indians and their customs:

Tobacco Pipes and Calumets

The pipes and calumets at Nett Lake are serpentine, with bowl round and slightly tapering downward. The stem is flat on the bottom, but angled on the upper surface. It is made either of stone or wood and is variously carved to suit the fancy of the maker. Feathers are also suspended from the stems of the peace pipes.

Smoking

The Bois Fort Ojibwa of our day smokes tobacco and must have it on all occasions of ceremony. Formerly he used the kinnikinik, which he obtained from the pulverized inner bark of

several plants. Among these were the partridge berry *(Mitchella repens)*, the bearberry *(Archostaphylos vva-ursa)*, the red willow *(Cornus stolonifera)*, and the species of dog-wood *(Cornus sericea)*. The latter was the plant most used and is now still used in certain ceremonies. This plant grows five or six feet high and is reddish in color, unless it happens to be growing in a shady place, in which case it is greenish. In preparing the kinnikinik from it, the stems of the plant are gathered green, and the red outer bark removed with a sharp knife. The inner, fibrous bark is then scraped off of the wood and dried in some container before the fire till it is crisp and brittle and is readily crushed with the hand. It is then "kinnikinik" and is ready for smoking.

Among the Bois Fort Indians tobacco is frequently used as an offering to Manabush and the other manido. It is also sprinkled on grave boxes to aid the dead on the journey to the spirit land. It is also used as a peace offering. Its origin is regarded as mystic.

Games of the Bois Fort Indians

These Indians have several games, all of which are given, as played by them.

The Pah-Gay-Say or Bowl Game*

This game is usually played for the purpose of gambling. It is played either by two individuals or by two sets of players. It might be termed the "Ojibwa Dice Game." On it the Indians often bet all they have. A description of the game and prerequisites, is here given.

A large, rather shallow, symmetrical, nicely finished, hemispherical bowl is one of the prerequisites. The others are the dice, and the counting sticks.

The bowl is made from a large, round nodule of a maple root, and, consequently, is hard to obtain and therefore a rare and rather expensive article for its size. It is fashioned solely with the aid of an ax and a knife.

The bowl before me measures nine inches in diameter at the rim and is two inches in depth. It is nearly one inch in thick-

*Pagesse (nin), I play the dish game. Pagessewin, Dish game (Baraga) Mitig-onagan, a wooden dish.

ness in the bottom part, but gradually tapers till at the rim it is approximately one-fourth inch in thickness.

The dice consist of eight thinly cut pieces of deer horn (or bone). These are cross-barred in rather deep-cut grooves on one side in rather checker-board style and the same side is stained in black. The other side is in the natural color of the bone. Four of these are round and about three-fourths of an inch in diameter; the thickness of all the dice is less than one-sixteenth inch. Two other dice are knife-shaped and are one-half inch in length and one-fourth inch in width. They are supposed to represent a knife, as their shape indicates. Another dice is in the shape of a gun, which it is supposed to represent. It is one and one-fourth inches in length and one-fourth inch in width. The other dice is a crude image of a person. It has eyes and mouth marks on the unpainted face-side. It is one and one-half inches in length. The head is one-half inch up and down, and about the same in width from end to end on a line across the face between the eyes and mouth. The body is one-half inch across the shoulders, three-eighths inch along the waist line and seven-sixteenths inch across the hips.

The counting sticks are eighty in number. They are about a foot in length and approximately one-fourth inch in thickness. They are usually made of trimmed sticks of spruce or other wood. (Twigs are sometimes used.) Half are colored red and half black.

When playing, the counting sticks are placed between the players in two groups of forty sticks in each group, a group belonging to each set of players. Or, sometimes they are placed all in one pile between the players. In the first case the winner draws directly from his opponent's counting sticks from the start for every count he gains. In the other case, both sets of players draw from the central pile till it is all used up. Then the winner draws from his opponent's pile till it is all taken. The player (or players) who gets the eighty counting sticks in his possession has won the game.

When the players sit down to play, the bowl, containing the dice, is placed on a blanket between them. Bets are then made. Then the player who won the last game begins the game with a song. (If no previous game has been played, lots are cast to see who will start the new game.) Then at a propitious moment

he strikes the bowl a light tap on the blanket (he lifts it a little above the blanket and sets it down with a slight, but quick jerk). This causes the dice to fly upward from the bottom of the bowl, causing them to flip themselves into various positions and to reverse their flattened faces, and, of course, change their counting values. As they settle to the bottom of the bowl, the result is watched with keen interest. The players, or group of players, tap the bowl alternately until one person, or set of players, wins all the counters—both those in the central pile and those which the opponent may have.

The rules for counting the points are:

1.	One white circular face up, all other faces black	1 point
2.	One black circular face up, all other faces white	1 point
3.	Two black circular faces up, rest white	2 points
4.	Three black circular faces up, rest white	3 points
5.	Three white circular faces up, rest black	3 points
6.	Four white circular faces up, rest white	18 points
7.	Four black circular faces up, rest white	18 points
8.	All black faces up	18 points
9.	All white faces up	18 points
10.	White faces of image and gun up, rest black	4 points
11.	White faces of image, gun, and one knife up, rest black	9 points
12.	Black faces of image, gun, and one knife up, rest black	9 points
13.	White face of gun and one knife up, rest black	7 points
14.	Black faces of gun and one knife up, rest white	7 points
15.	Black face of knife up, rest white	5 points
16.	White face of knife up, rest black	5 points
17.	Black faces of two knives up, rest white	15 points
18.	White faces of two knives up, rest black	20 points
19.	White faces of knives and gun up, rest black	12 points
20.	Black face of image up, rest white	20 points
21.	White face of image up, rest black	40 points

The definitions of the words used by the Indians in playing this game are:

Pug-gah-tsah-nik, the Indian dice used in playing the game.
Was-sung, the dice image.
Pash-kish-shegun, the dice gun.
Wah-wun, the circular dice.
Puggalyt-say-tah, let us play the dice game.
Ke-duck-kene-win, I have won the game.
Me-teo-nah-gun, the bowl in which the dice are tossed.
Mi-ti-go-san, the counting stick; they are eighty in number.

		Numerals used in the counting
Bes-shig	one.	*(be-jig)**
Neish	two.	*(nij)*
Niswi	three.	*(nisswi)*
Niwin	four.	*(niwin)*
Nanan	five.	*(nânan)*
Nish-shaw-siwi (or, -swi)	seven.	*(nijwâsswi)*
Shan-ga-swi	nine.	*(jângasswi)*
Ashineish	twelve.	*(midasswi ashi nij)*

Shi-anan.....fifteen. *(midasswi ashi nânan)*
Ashin-ish-waswi.....eighteen. *(midâsswi ashi nishwasswi)*
Neish-tunna (or, tanna).....twenty. *(nijtana)*
Nimi-tanna.....forty. *(nimidana)**

The Moccasin Game

The Moccasin Game, or bullet game of the Bois Fort Indians, is a much-played game. In fact, it is played so much and so much money squandered on it that the government had to put a stop to its being played. It is one of the worst gambling games. Not only the idle Indians play it, but the industrious Indians as well. One side puts up a saddle or a set of harness as a bet that it will win the game; the other puts up a horse, and so the betting goes on till each side has staked practically all they have. When the game is once begun it continues till one or other side has won. All day and all night the Indians play at this game until the members of one side have lost all the property they have or fatigue induces them to sleep.

The game is called Mah-ke-tse-nah-tag-tim, because it was first played with moccasins as the things under which the concealed things were hidden.

Four moccasins, mittens, gloves, pieces of deer skin, socks, or four pieces of almost anything that has a covering value; four bullets, plum seeds or any other small object; a stretched blanket, pegged down to the floor or ground; a couple of wands (mystic or divining-striking-sticks); a drum and drum sticks, and twenty counting tally-sticks are the requisites of the game. One of the bullets is marked, the others unmarked.

The twenty tally-sticks are usually pieces of wood split into splints about six inches in length and the thickness of a match or possibly double that thickness, though any kind of a stick or twig is sometimes used.

At the beginning of the game, each player has ten of these sticks, and when any player gets all of these sticks in his possession he has won the game. If a player should win ten straight counts from the start he would win the game, because he would have only his opponent's original tally pile of the ten to gain.

Some of the Indian names used in the game are as follows:

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*Baraga's "Grammar and Dictionary of the Otchipwe language," Montreal, 1878.

Chippewa Indians Playing the Moccasin Game
Plate 1

Pah-que-kwan-way-win-bay.....the marked bullet
Ma-ke-tse-nah-lah-le-tah (um-bay).....come play moccasin
Ma-ke-tse-nah-tag-tim (from mahkisin-a, moccasin) the moccasin game
Pah-ke-tah-e-kah-nah'k.....the mystic stick (wand)
Tay-way-e-gun.....the moccasin drum
Po-ne-gah-wish-shin.....I have won the game

The moccasin game is played by two principals and any number of assistants. Also one (or more) Indians beat the drum (or drums, as the case may be). Also one or more Indians of the side that is playing (hiding the bullets) sings a rather vocal-nasal song, pitched according to the enthusiasm the players put in the game.

When all is ready, the bets are made and the tally-sticks passed ten to each side. A toss of two sticks is made and the winner has the first play. The holder of the bullets then places the four moccasins on the blanket before him upside down and about six inches apart with toes pointing forward. The player is now to lift each moccasin and place a bullet under it in succession so that his opponent will not be able to detect under which moccasin he has placed the marked bullet, if he can. He takes the bullets in his hands and, joining the chant, shakes them, as he makes many pretenses at hiding and removing them as he lifts a moccasin with his left hand and places his right under it. Also, to confuse his opponents, he sways his body from side to side and goes through almost every variety of contortions till he has finally placed the bullets (and they are placed—not up the Indian's sleeve). He then suddenly holds up both hands, palm up and open and calls out in an explosive "Ho" in a high note.

The opposite side then takes the chant, or if continued by the side that has hid the ball, it drops to a low murmur. The guessing then begins. The striker of the opposite side raises his wand threateningly over first one and then another of the moccasins. He then pretends he is going to strike a moccasin, but withdraws as if in doubt. This is done to see if by some move, act, or color of the face of the player it can be detected under which moccasin he placed the marked bullet. Suddenly with one end of the stick he turns over a moccasin. If the marked bullet is not under this moccasin, he usually turns over another moccasin. If he should find the marked bullet under one of the moccasins he has overturned, he has the moccasins turned over to him. His side then begins to hide the bullets and the other side begins to

bet. (In some of the games the writer has seen wands and drums are also changed to the opposite side.)

The rules for counting the points are:

1. If the marked bullet is not found under the first moccasin turned over, it counts six points against the guesser (striker).

2. If the marked bullet is not found under the second moccasin turned over, it counts four points against the striker, provided it is an outside moccasin that is turned over.

3. If the striker turns over a middle moccasin and then an outside one and the marked bullet is found under the other outside moccasin, it takes eight points from the striker.

4. A player hides the bullet until his opponent finds it by lifting a moccasin from over it, or until he (the player) wins the game.

5. When the striker finds the marked bullet by lifting a moccasin, the moccasins and bullets are turned over to him; but if the bullet was found under either of the outside moccasins, he gives three of his counting sticks to his opponent. If found under either of the two inner moccasins, he gives his opponent two tally sticks.

The writer has seen the same game played differently. Every time the striker failed to locate the marked bullet it counted one against him and he gave his opponent one of his tally sticks, till his tally stick pile was exhausted and his opponent had the game. And if he succeeded in finding the marked bullet, he simply had the bullets and the moccasins turned over to him and his opponent began the guessing.

When the game is completed, bets for a new game are usually immediately begun.

The Snow Snake Game

The Bois Fort Chippewa had a game which in translation is "Snow Snake." It was played either on the ice or snow, preferably the former. In playing the game, as a rule, the players made a long ridge of snow. On the top of this they made a little furrow. In the game a snake-stick was used. It usually consisted of a pealed straight piece of hardwood, usually about five feet in length, ranging from a half to three-fourths of an inch in thickness. When playing, the stick was cast out from

the player endwise over the snow or ice. The front end of the stick, as cast, was dubbed the head of the snake. The other end was called the tail. In some cases the head was round, bulb-like, and resembled a snake's head in shape, having a cross cut to denote the mouth. It also had eyes, one on each side of the head. In other cases the head end of the stick was elevated in snake-head shape, as the head is held by a running snake, the head-end being carved in snake-head form. This head had eyes and mouth on it, also peculiar carvings to represent the stripes of the snake. Sometimes, also, the body of the "snake" had representative stripes carved on it. The bulb-like end, or elevated snake-head end permitted the snow snake to pass over slight irregularities in the snowy path and also to ascend the purposely made snow ridge placed across the snow path at a short distance from the player.

When playing, the player grasps the tail-end of the stick by putting the front finger of the propelling hand against it and the thumb of the same hand on one side and opposite the three remaining fingers of the same hand. He also often holds the stick lying lightly across the semi-closed fingers of the other hand as a support at about the balancing line of the stick. When ready, the player then stoops forward toward the ground and with the snow snake held horizontally from left to right, he thrusts it forward, causing it to glide over the snow rapidly for a considerable distance.

The object of the game is to see which player can propel his snow snake the farthest and still keep it in the snow furrow.

Tscho-she-mon (Shoshiman); or, the Children's Snow Snake Game

This game, also known as the "slipping stick" game, is played wholly by the Indian children. The snow sticks are about a foot in length; and the object is to see which player can send his snow-snake the farthest down an incline composed of the side of a snow bank, and, also, to give it the straightest direction. This is great sport for the children.

Quashquay-she-mung, or the Snow Stick Game

In this game a stick about two feet in length and in the cigar-balloon shape of the German type is used. At the thickest part it is probably two inches through. It is made of very light

wood, usually of cedar. It is called "Snake Stick" by the children and is hurled over the snow. It is not pitched but hurled with full stroke and with all the force one can command. It is thrown "just to see it go."

Lacrosse, or Baug-Ah-Ud-O-Way (Baggataway)*

The game of lacrosse was played by the Indians of the Bois Fort tribe in the old times, and is occasionally still played; but it does not seem to have been a part of the medicine lodge ceremony as it was among the Menomini and some of the other Ojibwa. It, however, was a head-man game.

From one Indian of Nett Lake, Ne-be-day-ke-shig-go-kay George Farmer, the writer finds that the game was played quite frequently about forty years ago on Rainy Lake, near the present town of International Falls. It was played between the Bois Fort players and the Canadian Ojibwa, who lived about Rainy Lake and Rainy River on the Canadian side.

Much property was bet on these games and the Bois Fort players usually won, it is alleged.

The game on Rainy Lake was played on the ice. There was a goal on each side of the narrowed-in lake at this point. The goals consisted of a large post or pole set up on the Canadian side and a similar one on the American side. The object of the game was to put the ball past the "enemies' " goal post. If the game was not played on the ice, a leveled place of ground was made on which it was played. In many respects the game resembles our football game.

A simple ball is used. It is about the size of a common baseball, with cover made of moose hide. When nearly sewed up, this cover is moistened and stretched tightly with deer hair, which is completely sewed in with sinew. Each Indian also had a ball club about the length of our baseball bat; but considerably lighter in make. At the club end of the stick was a sort of hooded ratchet, circular in shape and four or five inches in diameter; though some had a different shaped club of about the same length, but crooked at the end like a shinny stick. The

*Baraga gives (loc. cit.):
"*Pagaadowewin.* Indian ball-play.
"*Pagaadowanak.* Indian crosier to play with.
"*Pikwakwad.* Playing-ball (primary meaning: a knot or knob on a tree)."

crooked end had a network of thongs expanding from it and fastened to the straight part of the stick, some of the strands extending half way to the handle end.

A ball stick before me is still different. The hooded end of the first ball stick described above was of leather (moose hide). The ball catching end of the stick before me is a continuation of the wood of the stick itself. The ball stick is made of ash. Just before reaching the club end it is slightly thickened. From this thickened part it is pared down quite thin and while the stick was being steamed this part was twisted around back to the handle in hoop-shape and was fastened to the stick with thongs, thus forming a complete hoop. The hoop-band was then pierced in several places in about the middle line and through the holes thus made buckskin strands were fastened from without and same tied together within and made of such length within that when they were tied to each other, the hoop-rim, with these thus tied, made a basket for catching the ball.

The basket of the lacrosse club before me is about two and one-half inches deep. The lacrosse ball in my possession is of wood.

When playing, the player carries the stick almost horizontally before him. With it he catches the ball in the ratchet and as he moves the ratchet from side to side as he turns the stick so as to keep the ball in the pocket and still rolling on the ground or gliding over it in front of him, or swings it in the ratchet in various motions in midair around his head and in every conceivable position. While the one with the ball is trying to move it ahead of him to his opponent's goal by the constant swinging and twisting movements of his ball club in forward action, his opponents are trying in every way possible to knock the ball from the ratchet or dislodge it by hitting the stick. The object of each group of players is to defend its own goal and drive the ball to that of its adversary.

In the games at International Falls, the ball was placed on the middle line between the goals by specially appointed medicine men of a distinguished group of Indians who were present. Then at a given signal the opposing contestants rushed from their respective goals to the fray. In the last game played there, excitement at once reached a high pitch of tension. Instantly, upon placing the ball, the light and agile figures were

bounding and leaping over the ice. Each person was nearly naked, his loose black hair flying in the wind. In a moment all were struggling in a dense throng of combatants for the ball, as furious cries and whoops filled the air and resounded from the distant lake shore. Again they scattered as the ball was sent in one direction or another; and again they massed on the place where the ball was being rolled or whirled forward by a momentary winning player. Tripping, rushing, striking their opponents, and hurling them to the ground and sending the ball first one way and then another, was the order of the moment. The ball was driven farther and farther toward the Canadian goal. Suddenly it soared in the air over the goal of that side, and the game was won by the Bois Forts.

Shinny

This game was formerly played by these Indians, principally by the young boys and women, the writer is informed, though the men also played the game occasionally. The requirements of the game were a tightly stuffed ball (usually a buckskin cover tightly stuffed with hair), and each player had a stick with a crooked end, bent in cane-handle fashion. The game was played very much like the game of lacrosse above described.

The Ball Game

Another game played by the Bois Forts, the writer will name "the Ball Game." It is a modified shinny game and is played principally by the women. It has not been played much for years. The ball used is some three inches in diameter and is placed on the center line between the goals at the beginning of the game. At a given signal several contestants from each contesting side rush toward it with shinny sticks trying to see which can hurl it to the other's goal. At the same time a large party of each contesting side remain at their respective goal post to keep the shinny ball from hitting it. The game differs from shinny, described above, in the fact that to win the game it is necessary to hit the opponent's goal post with the ball.

Push-Kah-Wan, or Double Ball

Double ball is played by the women only. In 1909 they played it almost every day at Nett Lake throughout the entire summer.

Two balls, each about three inches through or smaller, are used. The covers were of buckskin stuffed with rags. The two balls were tied together with a buckskin cord some three inches to a foot in length. The game resembles lacrosse and shinny very much. Two goals are had and each player uses a stick in each hand, called *push-kah-wan-nok*. The sticks are straight, not crooked as in shinny. The balls are thrown in the air by shoving a stick under the string between the balls and tossing them forward or throwing them backwards over the head.

Every trick and strategem of the games of lacrosse and shinny are indulged in. The object of each contesting party playing is to toss or pass the ball over the opponent's goal, thus winning the game. It is very interesting to see forty women on a side playing this game.

Sha-Mah-Ke-Way-Be-Ne-Kom-Nung, or the Children's Dice Game

This game is played by the children for pastime only. It is a dice game pure and simple. All the requirements are four flat sticks, each about eleven inches in length and a half an inch in width about the middle line, from which they slightly taper toward each end. One of the flat sides of each is painted white or left the natural color of the wood, the other is painted black or blue. Diagonal cuts are also notched across the latter from side to side for decorative purposes. When playing, the sticks are tossed and struck on the ground, the points being determined by the way they fall. The rules for counting the points gained are:

1. As many children play this game as wish, each playing for himself.

2. If all the white faces of the sticks are up after they are tossed, it counts one point for the player who tossed them and he is also entitled to another toss before he passes the sticks to his opponent, the next player.

3. If all the dark painted faces of the sticks are up after they are tossed, it counts one point for the player who tossed them and he is entitled to another toss before he passes the sticks to another player.

4. In any other position the sticks may fall no counts are allowed and the player looses the right to toss the sticks till his turn comes again.

5. When any one player has won ten points he has won the game.

The Squaw Dance

The squaw dance at Nett Lake is held in a low, circular-built dance hall some sixty feet in diameter. The building is built of upright posts in stockade order, over which mud is plastered to fill the cracks. The roof is boards and tar paper. The floor is of dirt.

The drummers and musicians sit on benches surrounding the drum in the middle of the hall. The spectators are also seated on a continuous bench along the circular wall, while the circular strip between the spectators and the musicians is occupied by the dancers, each person being seated on the "spectator's bench" according to rank.

The drum used is the large Ojibwa manito drum, *Da-we-i-gon.* This is set on four peculiarly shaped drum legs *(o-ka-don),* and is also beat by a peculiarly shaped drum-stick *(ba-ga-o-ka-kwan).* When performing, from two to eight men beat the drum at a time.

This drum is a tub or half barrel, covered with pieces of rawhide. It is ornamented by swinging fringes of bright colored cloth, decorated with elaborate bead work. The four legs on which the drum is supported are also wrapped with bright colored cloth. Their upper ends are also curved outward and are tipped with feathers. The drum sticks are some twenty-six inches in length and each terminates in a three-inch ring at the beating end.

The dance is always held at night. In the main it is a social affair, though at times it is used to get the Indians to assemble so the chief can harrangue them on the problems of the day. At other times it is held to cure the sick or as a part of the death ceremonies.

In all its sessions both sexes take part. It is a partner dance. Each person chooses partners as she or he wishes, giving the one chosen a present each time. It is called "Squaw Dance," because the squaws can choose partners. It was at this dance in

the old times that the squaws chose their life partners. Let us visit a session of this dance.

At about 9 in the evening the musicians begin to beat the manito drum in the "round house." Immediately we go to the hall and on entering take a seat in the rear, as the other seats belong to the dancers. As the drum beats become louder the populace gather, every one bringing his sack of presents with him. All are also dressed for the occasion. The costumes in many cases are very fantastic. The bodies are wholly clothed. The men wear fringed leggings of tanned skins. All the feet are covered with elaborately beaded moose or deerskin moccasins, while about the ankles and knees are strings of bells that jingle with the stepping. Belts of sleigh bells are also worn by many dancers. Many also wear elaborately and fantastically-beaded sashes and "fire bags." Others are decked out in beaded shoulder straps, belts, and feathered pendants. Andy Fields has on his regulation bonnet with long-feathered streamers from the head backward over the shoulders and downward. Some of the actors wear rosettes. Several are wearing the full moose head and horns for a head dress. All are carrying some object in each hand, a pipe, stick of authority, or a beaded sack.

As soon as the populace has assembled the two door-keepers, the two men who sit next the door to the east of the hall entrance, fill the two ceremonial pipes with tobacco and carry them around the hall in opposite directions to the north side of the hall when they present them to the chief of ceremonies. This person takes the pipes, one at a time, and, holding them before him, turns one slowly around from right to left so as to make a circuit of the four semi-cardinal directions with it as he prays over it and tells Manabush that the tobacco is a thank offering to him. A live coal is then used to light the pipe, after which it is again twirled to the four semi-cardinal directions. The chief of ceremonies then takes a whiff of the pipe. It is then passed around and all in the house are expected to take one "draw" at smoking it. As it is being passed, the chief of ceremonies explains the sacred use of tobacco in these ceremonies.

After this "pipe of peace" is passed around, each person in the hall is given a handful of tobacco by the ushers. A smoke is then had, in which all partake.

As soon as this is done, the drum calls the dancers to action.

For some hours then the dance is more of a clown performance. It is a voluntary dance. Vigor is put into every step. The actors throw their feet from side to side. Some dance cross-legged. Others throw their knees up high in front and their heels high up behind. Others, especially those togged out with bells, race it at a gallop. Some bend their bodies forward and dance in a stooping position. The "horned beasts" chase and bellow. The dancers dance in all directions as they like, but never collide. In general, the whole group, however, circles gradually about until the whole dancing space is encircled. This act lasts about fifteen minutes. A lull then is had while the musicians start another "piece of music."

At about midnight the dancing ceases and a lengthy prayer is said by the chief of ceremonies divulging the purpose for which the meeting is held. A feast is then set out for all.

In the death ceremonies which are conducted in this dance, the deceased is eulogized and prayer is had for the safe journey of his "shade," after which the feast of the night is furnished by his relatives. And all they have is given away. (After the giving-away ceremony at one of the dances the writer attended, a collection was made to reimburse the givers who had reduced themselves to poverty.)

After the intermission, the true squaw dance begins. A vigorous chant is struck up. Sacks are opened. Presents are taken out and each person tries to choose a partner (sometimes two or more partners). The women choose partners as well as the men. A huge circle is formed and all dance around the circle from left to right, the receiver of the gift brandishing his present on high every now and then as he or she dances and utters a hoarse "Ho, ho." The step of the men is a uniform double treading with forward part of the foot, first on one foot and then on the other, keeping time with the drum beats. The dance of the women consists simply of short steps to the left, accompanied by little curtseys.

At the close of each set, the actors take their seats and at the beginning of the next chant a new set is formed, the receiver of the gift in the last set here tries to repay the donor of the previous set by furnishing him or her a gift in return. Thus is the dance kept up till daylight when all return to their homes.

Dwellings and Lodges

Besides the medicine lodge, the Bois Fort Ojibwa have the ordinary regulation wigwam, the birch bark camp, the bark house, and the "wickeup."

The birch bark (or cedar bark) camp is made by setting poles in the ground or on top of it in elongated-rectangular ground-plan style. These are firmly fastened together at the top by being tied along a center-ridge pole. Over this frame the bark is placed so as to make a comfortable dwelling. When the family moves the bark is taken down and transported to the new home, each carrying a part. Each camping place furnishes its own poles for house frame and braces. Thus in an hour after landing at a chosen site, the Indians have a house to dwell in.

The "wickeup" is simply some posts set in the ground over which a flat roof of brush is erected. At times the sides of the wickeup are also closed in with a thatch of small brush, which is firmly tied to the poles and posts. This style of house is quite comfortable in summer. While at times this sort of framework is added as a sort of porch to a house.

The tepee may be the regular round regulation type of wigwam, or it may be of the elongated style. The frame work is of poles tied together at the top. Over this frame are placed mats of birch bark or cattail flag. The mats of birch-bark are pealed from the trees in strips corresponding to the size of the tree from which they are stripped.

The strips are placed end to end and sewed together with basswood thongs. A bark mat thus sewed is often twelve to twenty feet in length and as wide as a strip of bark could be conveniently pulled off of the tree. The cattail-flag leaves are gathered when full grown in summer and woven into mats from three to five feet in width and from ten to twenty feet in length, strengthened at the edges by being counter wrapped with basswood twine. When put in place, these mats are projected over each other both on the roof and sides like shingles. An opening is left at the top of the wigwam for the exit of smoke. These wigwams are loose and light and furnish perfect ventilation. The only disagreeable thing about them is the ever smoke nuisance.

The Birch Bark House.—Many of the Bois Fort Indians now live in log houses, but an occasional birch bark house still re-

mains to remind one of the old times. The birch bark house was a permanent affair. It is elongated in ground plan. Its framework is of vertical posts to which horizontal pieces about two inches in diameter are tied at intervals of about thirteen inches. The lodge is about ten feet high and from ten to twenty feet long. The walls are also about six feet high and the width of the structure is about eighteen feet.

Poles parallel with the ridge pole make the roof frame-work. This frame is covered over with birch or cedar bark, matched in shingle style and firmly tied with basswood twine, the roof projecting out over the frame so as to form eaves. The doors are at the east and the west ends, under gables. Long poles are placed on the top of the roof and firmly tied down to keep the bark in place. A hole is left in the roof along the ridge pole near the middle of the house for the exit of smoke. The dirt floor is covered with reed mats. On the whole, houses of this type are very comfortable.

Implements

Most of the implements now used by the Bois Fort Indians are the same as those used by the whites. The bow and arrow are still used by the children, though they are not of the standard type. The ancient bow, now owned only by a few old men, is a flat piece of some tough wood, tapering at the ends and strung with a thong of rolled rawhide. The arrows are made of maple and are of two kinds, blunt and pointed. The pointed arrows are used to kill fur-bearing animals, moose and dear. The blunt ones are intended for killing birds and small animals. Of course, they are not used in hunting now, as the modern gun has replaced them.

Indian chisels and fish spears, made of iron, are still in use. The writer also saw two very small copper kettles, a Hudson Bay ax, a "trade hatchet," and a "lover's" flute.

Products of Manufacture

Furniture.—Up to the time that the writer made the "big payment" of 1913 the furniture of these Indians was of the crudest type, and in some cases, still is. For beds, pine boughs were spread on the floor, over which blankets and other bedding were spread. Frame beds are also occasionally made resembling

our trundle bed very much. A primitive bedstead is also made by setting four posts in the ground, two at each end of the bed, the posts being short. A crosspiece is placed over these and then on these crosspieces a rack is placed lengthwise of the bed on which cross slats are tied. This makes a comfortable platform on which to deposit and arrange the bedding which often consists of reed mats and a few blankets.

A few wooden bowls are also used as dishes. All the other furniture they now use has been purchased from the whites.

Cradles and Hammocks—Cradle boards are used for protection and convenient transportation of infants. These are made of light wood, and measure about one and a quarter feet in width and two and one-half feet in length. They taper somewhat toward the foot. A wooden band encircles the head of the cradle in front about over the child's eyes as it lies in it, and some six inches above its face. This serves to hold the face cover, or mosquito netting in summer and the blanket in cold weather with which the child is wrapped for warmth, from touching the child's face.

The board is padded with the crushed inner bark of the cedar tree, or with moss, or has a piece of quilt spread over it. A piece of buckskin is also sometimes spread over the upper end of the padding for the child's head to rest on. Wrapping material is nailed or sewed onto the edges of the cradle board and these are wrapped up over the child and firmly tied so that only its head is free.

At times the infants are put to sleep in hammocks, always, if they have become too large for the cradle board. The Bois Fort hammock consists of a blanket doubled once and, thus doubled, is held together at each end by a cord. Each of these cords are tied in the house wall so that the hammock swings across a corner of the room. Near the head end of the blanket, as doubled, a piece of wood is inserted to keep the sides of the hammock from pressing the child's head and face. This device is restful for the child and very convenient for the mother.

Mats.—The Bois Fort Indians have several varieties of mats. These are made from rushes, from cedar bark, and from the broad blades of the cattail flag. Some of the mats are woven coarse, others fine. They are from six to fifteen feet in length

and about a yard in width, and are used for bedding, and for house and floor coverings.

Rugs.—These Indians braid rags and strips of cloth into long flat pieces and then sew the pieces together into rugs, which they highly prize. When attending dances and religious ceremonies, a family often carries a rug with them to sit on when not taking part in the ceremony.

Twine and Rope.—Thread, twine, cord, and rope are usually made of basswood fiber; though other substances are sometimes used, such as sinew of the deer and moose, and rawhide. In preparing the basswood thread, the inner bark of the young sprouts is removed in sheets and boiled in water to which a large quantity of lye from wood ashes has been added. This softens the fiber and permits it to be manipulated without breaking. The unoccupied squaws then employ their time in pulling the bark into shreds and twisting it into twine and the latter into ropes and cords as needed. This twine is the sewing material used in sewing mats, erecting bark houses and tepees, and for almost all other household purposes. When put away for future use, it is hung up in hanklets.

Tanning.—Deer and moose skins are still tanned by these people. The inner surface of the skins are first cleaned of all meat and shreds of fiber, after which it is buried in the moist earth for at least a day and a night. It is then stretched over a leaning pole and the hair scraped off with a dull instrument, the hide being readjusted on the pole as the hair is removed. It is then soaked in water, rubbed and kneaded, then twisted around a sapling or pole, to expel the water. As soon as dried, it is rubbed and kneaded again to soften it and prevent it from stiffening and breaking when in use. The brains of the animal are then rubbed into the skin which is then rubbed and stretched till dry. It is then cured in the smoke of a slow fire.

Medicine Bags.—The medicine bags are the skins of small animals, birds, or snakes. When saving a skin for a medicine bag, it is cut open in the breast region and through this the carcass is removed, leaving the skin of the tail, feet and head entire. The skin is then turned inside out and tanned so as to leave the fur on it. It is then turned fur side out and the eye holes ornamented with bead work.

Snowshoes.—The Ojibwa snowshoe is constructed after three

patterns, one for children, one for women, and one for men. The shoes for the men and children are more pointed at the toe than those for the women; and those for children are more nearly round in the body part, that is, they are wider across the middle of the shoe in proportion to the length.

The Bois Fort snow shoe is somewhat of boat shape, eighteen inches to two feet in width at the widest part and forty inches in length. The frame is of a single piece of wood. The toe end is transverse and has a thinning of the frame to admit of a short turn without breaking. The toe is about eight to ten inches wide. The heel tapers almost to a point. The inside upper space is divided into three parts by strengthening crossbars. The intervening spaces are filled in by a network of braided buckskin thongs. In the center is an open space for the movement of the toes. When worn, the foot is securely fastened in place on the shoe by a cord that passes over the heel.

Bead Work.—The beads now used by these Indians are procured from the whites. The beadwork is the ordinary Ojibwa style. Beads are sewed on moccasins and other leather wear and on clothing by simply threading one or more beads on a needle and sewing them on the article in the designs desired. All the other kinds of bead work are made with warp cords stretched over a frame. The three principal kinds of this type are as follows:

In the first variety the cross thread (the woof) has as many beads threaded on it as will reach across the warp. These are threaded according to the colors wished to carry out the pattern. The frame is placed in a flat position and this beaded string stretched tightly across it. In addition, the beads on this string are placed in place one between each two strings of the warp. The threaded needle is then passed back underneath the warp through each bead to the starting point, thus entirely inclosing the weft.

In the second variety, there are two vertical warp cords between each two beads, there being an alternate movement of the pair of warp cords backward and forward.

In the third variety, the warp cords are wrapped over the top and bottom of the frame, each thread being a bead's width from the next. The pattern is begun at the lower end several inches from the frame. A threaded needle is passed through a bead of

the desired color and the thread passed under one vertical warp cord when another bead is taken up, the needle then being passed over the next warp cord. Thus alternatingly above one warp cord and below the next is the weaving kept up until the other side is reached. Then the outer cord is merely inclosed by one turn, and the return is made in the same manner to the side from which the beginning was made, except that the threads are woven alternately to the first.

Fire Bags and Beaded Vests.—A bead sack, or fire bag, is one of the presents given in the social dance, commonly called the "squaw dance;" and the receiver of it must always pay a pony in return.

These fire bags might be termed "dance bags." They are ornamented and worn chiefly by the well-to-do Indians at the dance. They seem to be worn only by the medicine men at the medicine dances. A medicine man considers himself fortunate if he owns one of them. Usually when worn, two are worn at a time, one on the left side and one on the right, though the writer has seen medicine men with but one sack. And again, he has seen one person wearing four or five of them at a time. It is also reported that one chief recently wore as high as a dozen at one of the social dances.

The bags are made of a piece of buckskin or cloth about sixteen inches wide, varying considerably in length. From the two upper corners of the sack there extends a continuous band about six inches in width so extended as to pass over the shoulder around to the opposite side. Beadwork usually covers the entire outer surface of the sack and shoulder parts. This is usually made in beautiful designs of flowers, twigs, and leaves, though sometimes more elaborate designs are used. The bag is a pocket with a slit in the flap-exposed surface. The pockets the writer examined were large. It was not learned that these bags have any "medicine" value.

Rabbit Blankets.—The rabbit blankets are called "way-k-wun" by the Indians. They are warm and are prized very much on that account. A person having one need not freeze in winter.

So far as meat is concerned the Bois Forts usually live on rabbits in winter. They snare rabbits, catch them in pitfalls, and in every way possible. The writer has seen Indians bring in ten rabbits at one snaring. The rabbit meat they dress and eat.

The rabbit skins they carefully dry. They then cut them into threads of one-half inch ribbon-width, and these they braid into blankets. White people sometimes buy the finished blankets and place them between two common blankets and sew them in, thus making one of the warmest kinds of blankets.

The rabbit blankets used by the Indians are unhealthy. They gather all kinds of lice. They cannot be washed. The hairs are also always getting over everything they come in contact with. Furthermore, the loose hairs are breathed into the lungs of the sleeper and of course are damaging.

Birch Bark Utensils.—The bark of the white birch is still used for making various convenient small vessels, pails, and trays. When made for permanent use, the parts of the article are firmly sewed together with basswood twine and the edges counter wrapped with the same material.

If the article is wished to be made water-tight its seams are sealed with pitch. The following are some of the useful birch bark articles used by the Bois Fort Indians: Mococks (in which wild rice and maple sugar are stored), dishes, sap dishes (used in catching maple sap), rice baskets, buckets, trays and winnowing dishes (used when separating the chaff from the rice).

The Canoe.—The Ojibwa reached his zenith in manufacture when he made the canoe. It is undoubtedly the most beautiful and light model of all water craft ever invented. The frame work is made of white cedar or some other light, durable wood. The ribs are thinned to the right thickness with a drawing knife, and when the desired number are obtained, they are steamed, after which they are curved according to the part of the canoe they are intended to brace. The tops of the ribs are then securely tied to the top plate-piece of the canoe with roots of the tamarack, or some other tough material. This frame is then placed in a sort of rack and the birch bark put on it so ingeniously and so well sewed together and the seams so well closed with pitch that the finished canoe is water tight and rides on the water like a cork.

Hunting and Fishing

The land of the reservation is very variable in condition. One-half of it is swamp and is known to the Indians as "mus-keg" land. The non-swamp eastern part is composed of rocky ridges,

flanked with clay land covered with pine. The western part that is not covered with swamp is a sand region. Nett Lake and its tributary streams occupy the east central part of the reservation, and the Little Fork and Nett rivers cross it. The swamp areas are in the jungle state, and the drier land is still heavily timbered, while wild rice grows in the shallow lake so that it looks like one vast wheat field in summer.

The region is practically in the virgin state. The same might be said of the region extending southward and eastward to Duluth and Lake Superior and northward to the Arctic Ocean, much of which is composed of lakes and swamps.

The region is a paradise for fowl and fur bearing animals. It is a hunter's heaven and to it hundreds of people flock every fall to hunt ducks on the lakes and streams. It is also a great fur region, the Indians selling thousands of dollars worth of skins annually.

The principal game birds are the following: Goosander (*Mergancer americanus* Cass), Widgeon (*Mareca penelope* Linn), Mallard (*Anas boaches*), Baldpate (*Mareca americana* Gmel.), Green-winged Teal (*Nettion carolinensis* Gmel.), Blue-winged Teal (*Guerquedula discors* Linn.), Shoveler or Spoonbill (*Spatula clypeata* Linn.), Pintail (*Dafila acuta* Linn.), Wood Duck (*Aix sponsa* Linn.), Redhead (*Aythya americana* Eyt.), Canvas Back (*Aythya vallisneria* Wills.), Bluebill (*Aythya marila* Linn.), Lesser Scaup Duck (*Aythya affinis* Eyt.), Ring-necked Duck (*Aythya collaris* Bonap.), American Golden Eye (*Clangula clangula americana* Bonap.), Buffalo Head (*Charitonetta albeola* Linn.), Old Squaw (*Heralda hyemalis* Linn.), Harlequin Duck (*Histrionicus histrionicus* Gmel.), Ruddy Duck (*Erismatura jamaicensis* Gmel.), White-fronted Goose (*Anser albifrons gambeli* Hartl.), Canada Goose (*Branta canadensis* Linn.), Whooping Crane (*Grus americana* Linn.), Sandhill Crane (*Grus mexicana* Mull.), the Sandpipers, Ruffed Grouse, Spruce Hen, Prairie Hen, and Sharp Tailed Grouse.

The principal animals of the region are the caribou (now almost extinct), moose, red deer, skunk, white weasel, mink, otter, woodchuck, pine squirrel, chipmunk, porcupine, muskrat, gray wolf, coyote, fox, beaver, martin, wild cat, mountain lion, rabbit and bear.

The principal fish are perch, pickerel, black and rock bass, and suckers.

In hunting fowl in the old times, snares, bows and arrows, and dead falls were used. Now the snare is used to some extent for land birds, but all other hunting of game birds is done with the modern gun.

Fishing is done with hook and line, with nets in summer, and with home-made spears through the ice in winter. In spearing the fish through the ice, the fisherman lies down over the hole he has cut, and covering himself over with a blanket so as to make it semi-dark, he can see the fish swimming about. It is then an easy matter to spear them. I have known Indians to spear all the fish they could carry in an hour.

In hunting animals, the big game, such as deer and moose, is shot with the modern rifle. Brush fences are piled to cause them to go in the desired direction so they will expose themselves to the hunters. In catching small game, birds, rabbits, wolves, coyotes, lynx and bob-cats, the snare is extensively used. These snares are made of sinew or of wire of the size required to hold the animal expected to be caught. "Picture frame" wire is used in snaring rabbits, and hay-bailing wire for larger game. The snaring is mostly done in winter. When a trail is discovered in the snow indicating the course taken by an animal in leaving and in returning to its lair, the person finding it will search for a spot where the trail passes near a tree or through a copse. He will then take a strong sinew cord or wire and, after tying an end to something solid on one side of the trail, will make a simple loop about eleven inches in diameter. He will then tie the other end to a tree or log on the other side of the trail. In snaring rabbits and birds, only one end of the wire is tied to some stationary thing, the other end being formed into a noose. The loop or noose is then set up across the runway by means of twigs or thin sticks placed transversely across the trail so as to be brought just high enough for the head of the animal to pass through it. When the animal finds himself entangled, instead of backing away it will push forward, causing the noose to tighten and strangle itself to death. The writer has seen the Bois Fort Indians snare a half sled load of rabbits a day.

As seen, these Indians are experts with a string. As an illustration, the writer was out surveying with two Indians. A spruce hen was heard to flutter in a nearby tree. The guide sat down and took a shoestring out of one of his shoes and tied it

onto the end of a stick. Then making a noose in the free end, he walked slowly up to the tree where the bird was and with slow movement pushed the stick up past the bird so that by considerable maneuvering the noose fell over the bird's head. A quick jerk then brought the bird down and the party had it for dinner.

In trapping animals the white man's steel traps are now extensively used. The Indian style of trapping is also still in use. Two systems are resorted to—the bear trap and the stake trap. Both are of the dead fall type.

The bear trap is sort of a covered pen so made of upright posts as to leave but one entrance. Through this the bear is compelled to pass to reach the tempting meat bait, placed in the far end of the pen. This bait is fastened to a trip-cord. The roof is a dead fall consisting of trunks of trees, weighted down with rocks sufficient to crush the beast. A disarrangement of the bait trips the dead fall.

Beaver traps are made much in the same way, but are baited with some vegetable substance of which these animals are very fond. Similar bait, colored with vermillion "medicine," is also placed between two two-inch sticks, laid crosswise of each other, and then attached to steel traps when trapping with modern traps.

The stake trap consists of four upright posts set in the ground in such position that the ground plan between them forms a parallelogram. A floor is made of logs the long way of the space enclosed between the posts. A weighted roof is then placed between the posts parallel with the floor. A stake is then set without the enclosure at two alternate corners and a brine soaked rawhide cord is loosely stretched under the roof across the floor space between the stakes. A heavy stick or small pole is tied to the roof logs at one end and, being placed as a lever over one of the corner posts as a fulcrum, its other end is tied by a buckskin cord in loop-style to the transverse buckskin cord above mentioned. Thus is the roof held up by this lever and the two cords. Stakes are then set so that the animal must enter the trap at the front entrance.

The salted cord is sufficient bait to tempt a rabbit or other rodent to enter the trap and gnaw the cord, and if gnawed in twain, the suspended roof is dropped on the animal's back and it is thus secured without injury to the pelt.

Food

The food of the Bois Fort Indians consists of such vegetables as they can raise, such as corn, potatoes, and other grain stuff, the white man's flour and sugar, coffee, tea, pork, beef, and canned goods as they can buy, together with all the wild animals and native vegetable foods and wild fruits they can procure in the region.

Most things are now cooked and eaten similar to the way whites prepare and eat food. Meats are boiled, fried, roasted before the fire, or cooked in the ashes, and so on. It might be added that the dogs eaten at the feasts are not skinned or drawn, but are pounded till they are "mellow," the hair singed and the animal cooked whole. The heads of rabbits are also cooked whole. The preparing of other foods is given below:

Wild or Indian Rice

Along the swamp borders of streams and in the shallow water of the numerous small lakes throughout the Great Lakes region and on westward through Minnesota to the Red River valley in that state grows the water oats or Indian rice, *Zizania aquatica* L. This plant belongs to the grass family.

The writer became acquainted with this plant at Nett Lake while he had charge of the Bois Fort Indians as superintendent and special disbursing agent. Nett Lake, the lake that bears that name, covers three-fourths of a township in area and is in the shape of a great lobster's hand with the claws pointing eastward, the major claw being the northern member. It is very shallow, the greater part being less than four feet in depth. In it the wild rice grows in such quantities that the lake looks like a great barley field.

The rice does not ripen all at once, so cannot be cut like a field of barley. But as the grain drops from the stalk very easily when ripe, it can be pounded off into a canoe with a stick and the green grain left to ripen.

The rice begins to ripen in the latter part of August. As soon as it begins to ripen, the Indians have a secret ceremony and much powwowing. Then the chief gives permission for them to go out and gather the rice.

With canoes, they go among the rice and beat the heads over

the canoe with short clubs. This they keep up till they have a canoe full of rice. They then go to the village with it.

At the village, the rice, which is just past the milk stage when gathered, is parched and scorched in a large iron kettle inclined over a fire so that the Indian woman can stir it to keep it from burning. By this process of scorching the hulls are burned from the kernels, or are so dried and charred that they can be loosened and removed by the next process.

As soon as the scorched rice is removed from the kettle and is cool enough to handle, it is placed in a cylindrical hole in the ground that has been lined with cement or marl from the lake. Then the Indian man of the house gets into this hole and tramps the hulls off with his bare feet. After the tramping is completed, the chaff, dust, and ashes are winnowed from the rice by the women. The product is then sacked and is ready for sale as breakfast food. It sells at not less than thirty cents per pound at the village and as high as fifty cents in the cities.

This rice is prepared and baked as gem cakes. It is also used to stuff ducks and other fowls when preparing them for dinners. In preparing it as breakfast food, it is prepared and cooked the same as white rice and can be cooked and in as many different ways. The preferable way, however, is to take a cupful of the rice and pour a cupful of boiling water on it at bedtime and then cover it up to keep the steam in it and let it set till morning. They put it on the stove and evaporate the remaining water. It is then puffed rice and is delicious with sugar and cream.

The Bois Forts esteem it cooked differently. Sometimes they boil the excrements of the rabbit with it "to season it," considering such a dish a luxury. To make the dish still more palatable and one of the highest epicurean dishes, they also occassionally take a partridge or a dog and without any dressing except to pick off the feathers or singe the hair, they pound it into the consistency of jelly. This they throw into the rice and boil it in that condition.

Waub-es-see-pin and stich-auc-es-see-pin are two potato-like plants that are found throughout the region, growing usually in wet ground. When boiled they are mealy. They are occasionally eaten by the Indians.

Maple Sugar

The sugar maple is a common tree of the reservation. It grows in groves. The trees are scarred by repeated tappings, causing each to be considerably enlarged in the part of the trunk that is subject to tapping. Many tons of the sugar are made annually. The species from which the sugar sap is obtained are *Acer saccharinum* Wang, and *Acer saccharinum, var. nigrum* Torr and Gray.

The sugar-making season comes when the first crow appears, usually about the middle of March while there is yet snow on the ground. The medicine men give orders and the sugar-making holiday is begun. Every one goes to his respective maple grove, which is the place of sugar making for that family and claimed by right of descent through the mother's totem.

The first thing on arriving on the ground is to erect the temporary tepees. These are the usual conical frame lodges, made of poles leaning together at the top, and spreading to the ground all around, covered with bark or canvass. There is one entrance door and the smoke from the central fire escapes at the top among the loosely fastened poles. Racks are then set up on which to hang the pots for boiling syrup, enclosed often in elongated bark tepees.

The next work is the preparing of sap dishes and sap buckets. Quantities of bark are peeled off of the nearby white birch trees. Pieces of the bark are then cut and folded into sap dishes or pans, each measuring eight to twelve inches in width by eighteen inches in length and about six inches in depth. The ends are carefully folded and stitched along the edge with basswood fibers so that it will retain its shape. Several hundred of these dishes are made by each family. Sap buckets are then made from birch bark. These are cut and folded at the corners so as to avoid breaking the bark. The folds are then seamed with pine resin. When completed, these buckets are elongated in shape. They are supplied with a carrying bail and are made deep enough to hold one or two gallons. The average bucket measures about six inches across the top which is round and eight or nine inches across the elongated bottom. The depth is about nine inches. To strengthen the pail the top and rim are held in place by means of thin strips of wood neatly stitched fast with basswood fiber.

When the preparations are completed, the sap gathering begins. One or more small oblique gashes are cut in each sugar tree so as to take out the bark and about an inch of the sap wood. Down this gash the sap runs to the bottom and trickles downward along the side of the tree. Just below the lower point of the gash a horizontal cut is made in the bark and a downward sloping chip is driven into this cut so that the sap from the cut above runs over it and drips from the end into a sap dish set under the chip to catch the drippings. Twice a day these dishes are emptied into sap buckets and the sap carried to the tepee to be boiled down into sugar.

The sap is boiled in cans and kettles within a large wigwam or outside under the racks previously mentioned. (The Ojibwa have a tradition that before they could get iron kettles their ancestors used to make kettles of clay with which they boiled sap.) So soon as one kettle full of syrup is converted into sugar, another kettle full of sap is hung over the fire, as many kettles being used in this process as the family can obtain.

When the syrup begins to granulate, it is poured into wooden troughs, where it is stirred and the granulating process completed. Much of the syrup in the act of granulating is thrown on snow to cool rapidly, forming sugar wax, which is a good substitute for our candy.

Sugar cakes are also formed by pouring the syrup into sauce dishes, small cake dishes and the like, when just in the act of granulating. These are remelted into syrup when needed. Much of the maple sugar now sold to the whites is in cake form, the granulated product being put into mococks or boxes for future use.

Berries

The principal berries used by the Bois Fort Indians are the the wintergreen berries, red raspberries, blueberries, cranberries and strawberries. The cranberries are sold in large quantities to the whites. The blueberries are also sold and also dried on racks and kept for future use.

Mortuary Customs

Soon after death the body is wrapped in its robes and blankets and put in a rude box along with the personal effects that the soul will require in the "happy hunting ground." The box is

then deposited in a dug grave with head to the west, as it is believed that the home of the "good dead" is in the brilliantly colored regions of the setting sun. On the coffin is placed a layer of birch bark with edges projecting downward along the sides and ends. Other effects of the deceased are then thrown into the grave, such as bedding, etc. Then about two feet of earth is thrown over this, and another layer of birch bark spread over it, after which the filling of the grave is completed.

Over the grave and of similar dimensions at its top there is erected a pen of split cedar strips (or of boards) some ten inches in height. This is filled with stones, upon which is laid a thatch of split cedar strips. A totem grave post is also stuck in the ground at the head of the grave, the head of the totem animal being usually placed downward.

The more modern graves, however, have a board box over the grave in which many of the effects of the deceased are placed, also water, eatables, tobacco and "medicine," while some of the more ancient graves simply have logs piled over them to protect the dead. Clapboards or picket fences are also often erected around the grave-boxes to keep stray animals from coming near and to prevent wayfarers and sacrilegious persons from desecrating the graves.

It was stated on comparatively good authority that burial by scaffolding or by placing the corpse in trees was occasionally practiced.

Should the deceased have been a member of the Grand Medicine Lodge, his nearest *mite* relative approaches the grave before any earth is thrown into it and addresses the "shade" of the body. The mourners also sometimes blacken their faces with ashes and charcoal. The women usually let their hair hang loose for a time after a funeral. Also at one funeral the writer attended, the chief mourners danced and sang vigorously over the grave before the grave-box was erected over it. A pronounced case of this kind was that of the burial rites over Charles Lightfeather, Nah-ne-to-wah-gah-me-ge-nung, October 9, 1913.

At the residence the medicine fraternity danced around the coffin, and when the corpse was put in the box they repeated the ceremony. At the graveyard four men sang and danced while the body was lowered into the grave. Then as each one of the family of the deceased put in a parcel of eatables or

clothing "an appropriate song" was chanted. A package of Indian rice was then thrown in the grave and the song then sung referred to the use of the rice and the help it would give in journeying the soul to the happy land of the dead. Similar songs were sung with the putting of tobacco and other things in the grave. Then as the dirt was thrown into the grave in a sifting process in handfuls at a time by the populace another song was chanted. This done, the grave was filled with dirt with a spade and heaped up. Then the four chant-actors danced on the grave, as they sang: "Our brother is journeying to the Happy Land. He is gone. He is gone."

The mortuary ceremonies connected with the Grand Medicine Lodge and the Squaw dance are given elsewhere.

A grave urn at Lett lake had drawings upon it. The drawings were on cloth, beaded in or woven work. They were symbols worn suspended from the neck at the front over the breast in the medicine dances.

DELAVAN LAKE MOUNDS

C. E. Brown

At Delavan Lake, where the Wisconsin Archeological Society has been conducting an archeological survey, a total of fifty-six Indian mounds have been located and mapped where only twenty were known before.

These mounds are in six different groups, one of which is at the inlet at the head of the lake, two are on the beautiful grounds of the Lake Lawn Hotel company, one on the Delavan Lake Assembly grounds at the outlet of the lake, and two at Spring Lawn, a resort on the southeast shore. The largest of these mound groups is at Lake Lawn, the summer resort maintained by the Commonwealth Edison company, the Peoples Gas company, and the Public Service company of northern Illinois for their employees. This group contains a total of twenty-nine burial, linear, and effigy or animal-shaped mounds. These are grouped about the hotel buildings.

A second group on this same property consists of eight mounds. The largest one of these, Lake Lawn earthworks, is a tapering linear mound of the fish type, and was formerly 150 feet in length.

There are in the six groups found on the shores of Lake Delavan a total of twenty-seven round or conical mounds, fourteen of the oval type, nine linear and six effigy mounds. Two of the effigies in these six groups represent the turtle, three are bird mounds, and one, now mutilated, an example of the familiar panther or water spirit mound of eastern Wisconsin. The birds are of two types, one having curved and the other straight wings.

Happily, nearly all of these interesting prehistoric Indian earthworks are favorably located for permanent preservation to the public, and this, and their marking with descriptive tablets, is to be taken in hand by the Delavan Woman's club, the hotel company and the local Rotary club. This, when accomplished, will bring interested visitors to Delavan to see them from all parts of Wisconsin and Illinois.

The Wisconsin Archeological Society has also located a total of twelve former Winnebago and Algonkian village and camp sites and other remains of the early redman on the shores of Delavan Lake. A report containing descriptions of the local mound groups, village and camp sites, burial places and trails is being prepared by the society and will be published for the benefit of those interested in the Indian history of this region.

Investigations are also being carried on by the state society in other parts of Walworth county, and a report on the entire county may be ready for publication in 1925. It is desired to make this report as complete as possible, and present and former residents of this county having Indian information of a desirable nature are requested to address the society at its Madison office.

ANALYSIS OF ANCIENT SINHALESE METAL

Geo. Brinton Phillips.

Ceylon is a land of many attractions and offers to the visitor unusual sights and possibiliites. It has picturesque scenery, tea plantations and sea bathing, a jungle with a variety of wild animals, and an assortment of snakes. Ceylon uses elephants that are trained to work, hauling heavy logs out of the swamps and who do *not* keep one eye fixed on the clock about lunch time, but when the day's work is over, are taken down to a mountain stream

in which they splash about and enjoy its cool and refreshing water.

At the little village of Kandy there is a charming lake, and on its borders a Hindu temple, which contains as its treasure a tooth of Buddha and although lost or mislaid many years ago, has been replaced by an ivory tooth of generous size, worshipped by the devout and allowed to be gazed at by the tourist —for a fee. The native Sinhalese is a gentle, mild-mannered man and as waiter at the hotels wears a tortoise shell comb in his hair as an adornment, and there is a species of crow at Colombo of a social and rather inquisitive disposition, who will hop into your room if the window is open, inspect your belongings and if he sees any bright object like your eye glasses or other glittering thing he takes a fancy to, will fly off with it and deposit it in his nest in some tall tree top, so that at the hotel servants are above suspicion, and the guests honest and, if anything is missing, blame it on the crow.

In addition to all these attractions Ceylon has a buried city, Anaradapura, with its curious dagobas, mausoleums for sacred relics, dating back to the first century A. D. (but that is another story), and at Colombo there is a museum which contains some unique objects of Hindu work, and some specimens of a metal which has been a surprise to the archaeologists. It was here at the museum the courteous director took from one of the cases a copper begging bowl and presented it to the writer for analysis. This ancient receptacle which the yellow-robed mendicant carried for the alms which he received in the shape of rice or other food, was so worn away by long use and scraping that the bottom was entirely gone and only the rim remained. The specimen was found at Polonnawura province of Ceylon, date about 12th Century A. D. The bowl was 6 inches in diameter, one sixteenth inch or more thick, but difficult to decide whether cast or beaten into shape. The analysis made by the writer gave interesting results as follows:

Copper	77.46%
Tin	19.63%
Lead	.19%
Cobalt	.43%
	97.71%

Owing to oxidation it was difficult to get clean metal which would have increased a little the amount of copper. The tin present was rather excessive, more than was required either for hardening or making a good casting, and the cobalt and lead, doubtless impurities in the ore. The specimen was undoubtedly a true bronze.

COLLECTING AMONG THE MENOMINI

Alanson Skinner

The collecting of ethnological specimens from American Indians in their own haunts is not at all the cut-and-dried proposition of a house-to-house canvass making inquiries for antiquities and their subsequent purchase. Fundamentally like his white brothers in his emotions and passions, nevertheless the Indian is outwardly very different. His viewpoint towards life, civilization, and his neighbors is not ours; he is a slave to convention and tabu, a stickler for etiquette as he knows it, and is conservative to a greater degree than the members of any other race.

Thus it follows that the ethnological collector must play his game according to the rules, and the chief rules are these: He must make a good first impression—and this is done by searching out the tenets of tribal etiquette, and obeying them—and also, if possible, by learning the personal tabus of the individuals he is to visit. This is of secondary importance, for often these are so many and diverse that the Indians themselves constantly transgress them when visiting each other. How in the world is one to know that a certain Indian will meet condeign disaster if he eats the flesh of a jack rabbit, or even takes food or drink from a dish in which some of the tabued food had been placed? Yet I once narrowly escaped serious trouble with an important Zuni shaman on this very account. One's interpreter can often help in this matter, yet, as has been said, even he may not know. Fortunately tabus of the nature described are rare among the woodland tribes although I have heard of such among the Menomini.

Then there is the matter of entering, going to the proper seat, accepting the pipe and food set before one, and otherwise act-

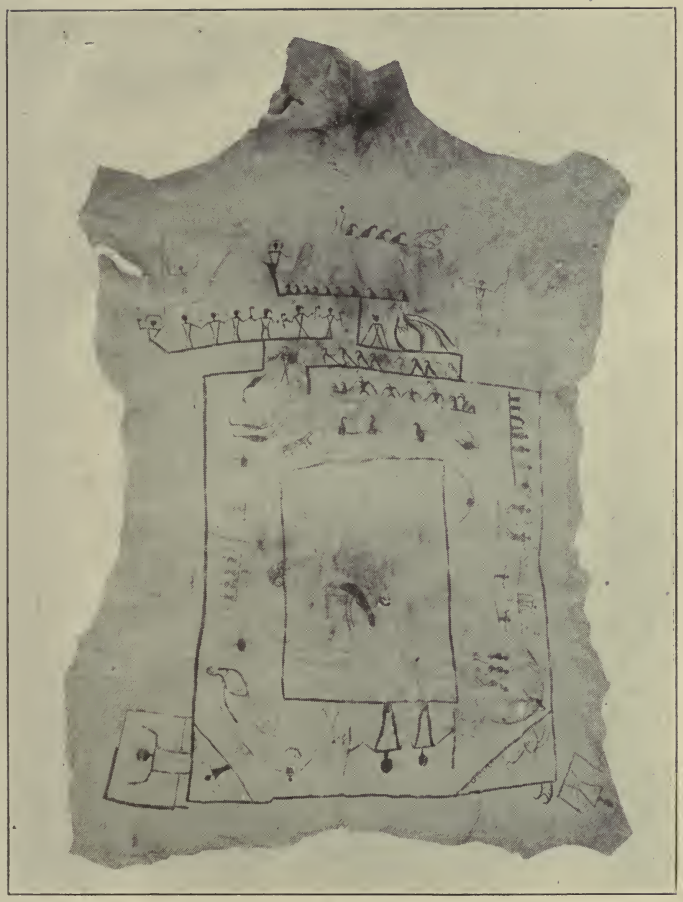
ing in gracious accord with the manners of the land. These rules are widely disseminated. Still, it may be said, as a general rule, that a white man who has the instincts of a gentleman, who is courteous to his Indian acquaintances, and who treats them as men and equals instead of monstrosities or curiosities, will soon master the intricacies of their character.

When one visits old style conservative Indians it is not polite to mention the object of one's visit at once. Instead, one sits around and chats. The Indians know you have some object in view, and are the more willing to please you if you first please them by going through the traditional formality of an exchange of courtesies.

In inquiring for specimens it is necessary to specify exactly what you seek, especially if this be your first visit, and there are formal ways of asking for sacred objects. The Indian is not apt to show his medicine bag or sacred bundle on a mere request from a stranger. It may take many calls before he feels sufficient confidence in you. And then, among most forest tribes your request should be accompanied by a gift of tobacco. Among the Menomini it may be necessary to insist to the extent of making four such gifts. You may be refused three times, but four is a sacred number, and there is little likelihood of a failure on the last demand. Once seen it is usually possible to obtain the specimen, if a price can be agreed on.

So it is with the search for specimens but, as one has to visit remote localities and meet persons of decided character, one has usually an unending series of surprises and adventures, from sad to gay, in the course of one's work. One sees much of the odd corners of the world, one dares, and one receives experience, pleasure, and many memories. But remember, bitter comes with the sweet, and, as is usual in this world, in much more generous proportions.

In the spring of 1919, Captain John Satterlee, Joe Pecore, and the writer made a trip from Keshena to the Zoar ("Pagan") settlement. It is a drive of twelve or fifteen miles, and we made the journey in a light buckboard drawn by two Indian ponies. On our way we were overtaken by no less a person than Indian Court Judge Sabatis Perrote, driving a rickety one-hoss shay, pulled by his spotted pony and followed by his dog Änämäk, who was spotted in almost the same pattern. The



Painted Robe from Pitwäskum's
War Bundle
Plate 2

old judge was also on his way to Zoar, where he was to conduct a ceremony of the Medicine Lodge.

So we jogged merrily along, talking about everything under the sun and exchanging pleasantries with the judge, until we had passed through and beyond Neopit with its sawmills, and came to a branch road that wound up hill through a dense forest of pine and towering hemlock. We were on our way to visit an old friend, one Wasä′, who had some relics of the past for sale. Wasä′ dwells in a little gemlike valley set in the pine covered hills. His residence is one of a group of well built log cabins, marking the site of an abandoned lumber camp, and beyond the cluster of houses a tiny meadow or hay marsh lies velvety green amidst the purple conifers. Bears venture down out of the woods in the fall, and Wasä′ has slain them from his door step.

We purchased an otterskin medicine bag which Wasä′ had been holding for us, and Uncle John effected a trade with our host's wife, giving her some dried bear's gall in exchange for a gorgeous bead belt which, great generous heart, he soon afterwards gave me, as he would cheerfully give me his last mouthful of bread. As we were leaving Wasä′s house, a shrill cracked feminine voice assailed our ears—"Hai-i-i, Weasel, my grandchild, come here! I want to talk to you!"

Turning, we saw an ancient crone, the grandmother of Wasä′ I think, doubled over on her cane, blind, but still not speechless. I remembered her at once. Six or eight years before I had bought some specimens from her. We went over and entered the little one-room cabin where she dwelt, and I gave her tobacco to honor her sacred things.

"Ah Weasel, little Weasel," she exclaimed, "I never expected to live to see you again. Look, here are many bags and bundles. I cannot see, but you open them and take out what you want. I am too old to need them now and the money you will give me will buy me little comforts!"

"Yaw Noko! Yes, grandmother, let it be so," I answered, and soon Uncle John and I were busily engaged in untying her bags. There was a claw of the grizzly bear as long as a man's finger, slain years ago somewhere across the Mississippi, and now a charm on a necklace. There were little beaded pouches to hold medicine roots, square, with cunningly wrought designs in large, coarse beads. The size of the beads indicated their

antiquity. There were the famous "Pony Trader" beads, so-called because they were part of the stock in trade of the first hardy white adventurers from the east, who carried them on pony back to the tribes of the interior. Like nearly all trade beads they were made in Venice, but the style seems to have gone out of vogue in the thirties or thereabouts.

Many things we bought of grandma and left her happy, while we resumed our journey, cutting through the forest instead of going back the way we had come.

Crossing a trout stream I was minded to fish a bit for the night was yet a long ways off, so we stopped and while Joe Pecore smoked, Uncle John and I fished down the current. We had but little success and I soon got far in the lead. Suddenly, as I was casting in a particularly tempting pool, I heard a "Hau, bojo nikan!" from the opposite bank, and looking up beheld a tall, fine looking Menomini, a friend of many years' standing. For several minutes we talked of old times, and then he said, meaningly: "Come to my house tonight. I have some prime furs I'd like to sell you." "Oh, hau!" I replied, and he vanished.

Now I knew that my friend had no furs to sell, and I knew also that he knew I had no desire to buy any. Therefore it was doubtless something more important than fur which my friend wished to part with. Certainly it was something "medicine." I retraced my path, picking up my uncle on the way. "Eh! we will go right over after supper," said the old man. "Mebbe his furs will spoil if we don't hurry."

Supper that night was in our sleeping quarters at Zoar, the government Indian farmer's house, kindly lent us by Ernest Oshkosh, grandson of the famous chief by that name. It rained without, but inside we had fresh brook trout and bacon, a roof that was whole, and clean beds. Enough for a king.

After supper and dishwashing—a thorn in the camper's side—we hitched up again and drove over in the dark to visit our friend. He lived in a little house of clapboards and bark, open to the wind and rain, leaky and squalid. But he made us very welcome, and, poor though he was, we did not lack maple sugar nor tobacco as we sat in dry spots on the floor. Just as we suspected, the furs were beautiful medicine bags of otter, mink, squirrel, snake and even black woodchuck skin, wooden bowls

and spoons, a redstone pipe with a spirally carved or twisted wooden stem like an auger, a medicine charm made up of a tiny bow and arrows—oh a dozen other things, and all at reasonable prices.

"You are my old friend, Weasel. I want you to take these away. Anyway I know the old gods are false now. *We eat the medicine* in this household."

"We eat the medicine!" The cat was out of the bag! Several decades ago Indians from the southwest began to bring up to the northern tribes small disks or buttons of sliced "peyote," a narcotic plant, which, when eaten, induces gorgeous visions and hallucinations, with wonderful color combinations. Its use has spread like wildfire despite all efforts to combat it, and with it has gone a set of religious teachings half ancient Indian and half biblical. These teachings are said to be wholly ennobling and uplifting, but the use of any powerful narcotic cannot be beneficent. Among the northern Indians the new drug-induced religion has caused profound changes. Old customs have been condemned and abandoned, and the religious and social paraphernalia accompanying them have been destroyed. The Menomini happily have resisted the introduction of the drug most bitterly, only a few families, such as this one, who have married among the Potawatomi and Winnebago tribes who are riddled with converts, have succumbed.

But we refrained from voicing our thoughts. Nothing in this world can be so fruitless as an attack aimed at a man's religious convictions. Instead we changed the subject and asked our friend what of his father, a wabano or prophet of importance. In return we learned that he had been dead a year.

Asking if his jugglers and prophets outfits were destroyed, our host said no, they still lay on the dirt floor of the old man's bark house. We might have them, he said, and he would gladly pilot us to the spot.

Next day the rain still drizzled down, but shortly after dawn we met our companion on the road and journeyed over an execrable trail some three miles into the forest not far from the Niganis settlement. Here stood a dilapidated bark house, doorless now, with the floor partly wet with rain. On the walls and on the couches about them and on rafters we secured a beautifully preserved war bundle, a set of sacred red painted

lacrosse sticks with the equivalent woman's shinney-stick and double ball, a conjuror's painted double-headed, wheel-shaped drum with the sacred bones a doctor of this type swallows to enable him to see the disease inside his patient's body, and all the old man's personal charms. Outside stood a nearly life-size statue of the god Wabano, the morning star, and this too, with all the rest, is now deposited in the collection of the Museum of the American Indian, Heye Foundation.

That evening we all started fishing, as the rain had ceased, but we were delayed, for on the way we passed an old lady hard at work bending over and tying the poles for the framework of a Medicine Lodge. A regular "bee" was in progress, for swarms of Indians were cutting poles and gathering basswood bark for tying them. Our old lady was alone but not happy in her solitude, for as we drove by she raised her voice and roundly berated us, especially me. "You own this thing too," she complained, "You are a Mitäo (a member of the Medicine Dance, and you pass by to have a good time and never help me! Yes, that's the way with these dog-like young people nowadays! They have no reverence—when I was a young girl——"

This tirade was too much for us. We stopped and we all helped her for an hour, until she was reinforced. Then we went to our trout stream, and, naturally, after so pious an act, our creels were heavy when we got back. But on the next day, homeward bound, I stopped to wet a line in a stream which crosses the Neopit Road, in a very public and much-fished spot. The very first cast, dear readers, procured me a two-pound brook trout, showing that the reward of the righteous is certain.

One rainy day last summer Mrs. Skinner and I commandeered a Ford car and with Mitchell Wakau, the Menomini Indian policeman, at the wheel and Uncle John Satterlee as guide and interpreter, we set off, as usual in a drizzling rain, for Zoar settlement. Our lunch was poor that day and noonday found us beside a miserable leaky wigwam made of a few mats and some leaky cotton duck. Inside was a poverty-stricken family consisting of a widow and four little children. Mrs. Skinner could feel no appetite with that hungry brood unfed and no more could we, so in a trice the lunch was theirs and fortunately there was enough to go round. But Indians are an independent and a grateful folk and as we started off with a great clatter and

rattle such as Fords delight in making, a feeble but shriller clamor arose in competition by the wheel and poking out my head I saw a tiny bare foot lad, one of the widow's brood, running alongside and trying to give me a pretty beaded watch fob in return for our largess. Poor little widow's mite, he was quite unwilling to accept the silver coin I passed him and stood looking dubiously at it as we faded from view down the road.

Proceeding from this abode of woe we arrived at an isolated log cabin where dwells Teko Whitefish. Inside all was abustle with Indian activities. Mrs. Whitefish was making a pretty splint basket, while her spouse, a well known Indian silversmith, was beating out silver brooches. In another corner an old woman was weaving a yarn bag.

Another ancient grandma—surely she was old enough to remember stone axes and copper knives it would seem—was hoeing corn outside. Here we did have luck, for, drawing Mrs. Whitefish aside where we could be unobserved, I gave her tobacco and persuaded her to get out her otterskin medicine bag. To my delight it was beautifully adorned with dyed porcupine quill embroidery and this she was willing to sell me for twice four dollars—again the sacred number.

The old lady outside was now called in to show Mrs. Skinner her treasures. It developed then that she was no Menomini, but a Potawatomi, and very deaf, so that we had to shout to make her hear. But she gladly displayed her little treasures and some we bought. Meanwhile Captain John amused us by running comments in English. The old lady was a little dirty and deaf, maybe, but after all we ought to love her and if she was a little older she would make him a fine wife! And so forth, quite regardless of the white mans tradition that the Indian has no sense of humor—a silly tradition reflecting on his own!

On our way back to Keshena we stopped again, this time to visit a lame Indian named Näwägizîkwäp, whom I had long known. In the winter of 1910 Uncle John had accompanied the agency doctor to Näwägizîkwäp's house to interpret while the doctor treated the Indian's son. The younger man was at the point of death with tuberculosis, and the doctor broke the news to the old people that he had not long to live. The family was desperately poor and they appealed to Captain Satterlee to beg me to pay for the boy's funeral, saying that if I would only do

so his medicine bag of otterskin, beautifully quilled, should be ceremoniously purified and given to me. The money was sent and Captain John rode through deep snowdrifts to the house with it, arriving just as the unfortunate youth breathed his last. Some months later, the appropriate rites having been held, the otter was duly sent me, the first, and one of the best quilled otter bags I ever collected. The following year the family sent for me and let me have two war bundles, a war pipe, various embroidered and beaded garments and a curious little bowl of wood, carved to resemble a porcupine. These relics had been in the family since they dwelt where the city of Milwaukee now stands.

Therefore Näwägizîkwäp—his name has some now forgotten reference to the sky or heavens—was an old friend, and we felt sure of a pleasant reception. Nor were we disappointed. It rather tickled us to find that the little old lady of the house, generally called "Matilda Jackson," promptly claimed relationship with my wife, whose totem, according to Indian rules, is the porcupine. As Mrs. Jackson was a Turtle, she pointed out that the two animals, through some native notion, were partners. Consequently Mrs. Skinner was "*nitotäm,*" or "my relative" to her. We had a jolly visit, and bought some things. While examining a beautiful woman's robe of dark blue broadcloth with appliqué designs in bright colored silks along the border, I, who happened to be talking volubly in abominable Menomini, happened to pronounce the word "*n'dabokinûm,* I give it to you," very correctly and with proper emphasis. The old lady was delighted and rolled the word over on her own tongue, as one would a sweet morsel—"*n'dabokinûm, n'dabokinûm,*' said she to herself.

"*Oh, hau! Wäwänini!* I thank you," I cried promptly starting for the door with one beautiful garment. "Yaw-w-w!" screamed the old lady in mock consternation, tugging at my coat tails with her tiny hands. Of course I pretended to be inexorable, until she bought us all off with presents of maple sugar cakes, according to time-honored Indian joking custom. Thus the affair ended in gales of laughter, and we sped away to our home at the Agency.

A TRIP TO THE POTAWATOMI

ALANSON SKINNER

My first meeting with Benjamin Mexico was in 1912. I had long wanted to make a trip into the woods about Carter's Siding, Wabeno, and Laona to visit the Potawatomi who are scattered through the hard wood. Captain Satterlee had made a preliminary trip at my request and had brought out an interesting series of specimens, quite unlike those I had found among the Menomini, and he reported a rich field. He it was who discovered Mexico, then living at Keshena, and wrote me that Benjamin was a veritable polyglot of Menomini, Ojibway, Ottawa, Potawatomi, and English. Delighted to be able to acquire such a paragon, I wrote Satterlee to hire him, and, in September, left New York to meet the two Indians at Green Bay, en route for the woods along the Wisconsin-Michigan border.

I remember well how Mexico looked when I met him at Green Bay. Tall, lean, cadaverous, with a lugubriously drooping sparse mustache and preternaturally sober countenance. He wore a floppy black felt hat on his head and a long black frock coat that had seen better days. His air was one of broken down gentility.

We spent the night at Green Bay. Then the following day, by means of various railroads and logging trains, we got ourselves deep in the forest, eventually quitting the train at Camp Four, somewhere west of Wasaukee. At Camp Four, after a hearty meal at the camp, we shouldered our packs and set out for the settlement of an Indian named P'kwagundip, a Potawatomi.

Now the early fall that year was cold and rainy. The pony trails were deep with mud, the swinging bushes gave us unwelcome shower baths and ever and anon there would come a cold sleety downpour. We were carrying on our backs our blankets and ponchos, our food and our tent, and I, for one, despise the Indian packstrap, which runs across the forehead, as a means of transportation. To a tyro the process becomes agony in a short time, every muscle of the neck aches excruciatingly and even a small load is intolerable. The Indians, however, claim that constant practice inures one to the strain and far greater loads can be borne in this fashion than in any other, with the

added advantage that the hands are free. I well remember staggering over a short portage in Canada, between Lake Superior and Hudson Bay, with a comparatively light load. Nearly perished with the pain in my neck, I was about to throw off my load when a noise caused me to look up. In the opposite direction was coming a slight young Ojibway girl, not more than sixteen years of age, easily, cheerfully carrying on her back a whole sack of flour. Somehow I finished the carry.

Benjamin Mexico was a curious compound of Menomini, Potawatomi and Ojibway blood, and his Potawatomi ancestry was most apparent in his utter incapacity to judge distances. The average member of that tribe can conceive of no other unit of measure than a mile, I firmly believe.

"How far is it to P'kwagundip's camp, Benjamin?"

"Oh, mebbeso one mile."

In reality it was about three miles, and so it usually proved, throughout that trip, that a Potawatomi's mile was always very much under the mark, and Satterlee and I multiplied all their statements of distance by three. The Potawatomi mile was very much like that elusive measurement so dear to the Jamaican negro of the jungles of tropical Central America, who always happily tells you that your destination is, "Oh, not *too* far, sir!"

At P'kwagundip's camp, however, we finally arrived, set up our tent, made a bed of balsam boughs, and cooked supper and dried out. There were several Potawatomi families there and the framework of a long, low structure in which they had recently held the Medicine Dance or Midewiwin, was still standing. From the Indians here we were able to collect a few specimens, notably some bone awls, made of deer bone, and still in use, but resembling in every particular the implements of this nature so often unearthed from ashbeds and fireplaces of prehistoric Indian sites. These awls were true survivals of the past. I have once or twice seen them among the Menomini.

From P'kwagundips camp we proceeded on the following day, this time provided with pack ponies, to whose Indian saddles our equipment was hitched. We went some three "Potawatomi miles" to the log cabin of one " 'Tawas" (Little Ottawa) and there made a more permanent camp, intending to strike into the Potawatomi settlements which clustered about this center.

By now it was apparent that the Potawatomi were very differ-

ent in their personality from the Menomini. Big and bony in physique, we found them surly, given to blustering, and overbearing. Moreover, as an interpreter Mexico was a wretched failure. First, he antagonized the Indians by demanding exaggerated deference and respect, claiming to be their chief, by virtue of the fact that his father Wämegisako (White Wampum) had been chief over the local bands of Potawatomi, Ojibway, and Ottawa before him. This argument did not impress the Indians at all. Moreover, Benjamin was not only a convert to Catholicism but was very rabid and intolerant of "pagan" customs. This, of course, was very unfortunate for us, for it was from the pagans alone that we could obtain the specimens we desired for the museum. Even when we did get specimens we found Mexico would be unable to translate any information concerning them, but it was not until later that we found out that this was due to prejudice.

On our second or third day at 'Tawa's camp, Mexico proposed that he and I should hire two ponies and visit some outlying families near the Michigan line where he assured me that we would be able to make a great haul of specimens, including a wampum belt and an otterskin medicine bag decorated with dyed porcupine quills. The prospect seemed good, so leaving Satterlee in charge of the camp we set out early one chilly, rainy morning.

At this time my horseback experience had been confined to a short trip out to Wabeno. On the way, Mexico and I jumped a black bear. We heard it run and crash through the undergrowth with an occasioned loud "woof," and the horses smelled the animal. My pony gave a wonderful exhibition of how a Wisconsin Indian pony can buck. Some way I stuck on, more dead than alive, but I still was very sore and uneasy in the saddle.

The journey was a long one—far longer than I imagined, even after multiplying Mexico's statement of ten miles by three. We returned through P'kwagundip's camp and forded the icy Muskrat River, which was high and dangerous. Chill autumn winds cut us to the bone, sleet fell and encrusted our clothes. The trails were narrow, muddy and rocky, and the undergrowth slapped us in the face at every step. It was a miserable journey. But Mexico was in the best of spirits and, as he jogged

along behind me, he regaled me with the narration of the remarkable story of how Mä'näbus, the Menomini culture hero, turned himself into a woman in order to gain the confidence of Turtle and pilfer his sacred Medicine Bundle. Judged even by our standards the tale was quite humorous and this served to lighten the cold, gloom, and eventually hunger that settled down on us.

Late in the afternoon we came upon a little cluster of bark houses and log cabins where we were boisterously welcomed by a swarm of Indians, all of whom were decidedly under the influence of strong waters. While they were friendly enough, the fact that all were armed and some were firing their rifles for pure joy in noise made both Mexico and me feel that it was a poor place to spend the night, so cold, stiff, tired and hungry as we were, we pushed on to another place that Mexico knew of. It was beginning to get dusky. The sleet still fell in fitful gusts, coating my mackinaw with ice and congealing on my hair and mustache. Our ponies were nearly exhausted and we plodded heavily through the streaming trail. For a long time we passed through a grove of young birches whose white bark and yellow leaves seemed to lend a sickly jaundiced hue to the landscape. We forded swollen creeks, passed a deserted Medicine Dance lodge frame, and, after an hour or so of discomfort, we came, just at dusk, to a scraggly clearing where stood a large log house. We fell, rather than dismounted, from our ponies, and with numb fingers unsaddled and picketted the animals. Then we went over and with some difficulty roused the old Potawatomi couple who resided in the cabin and got admission to the fire and shelter which they enjoyed.

As we had been ever since early morning without food, we made our wants known to the old folks who soon set before us some cold boiled bear meat and squash, both, of course, utterly without seasoning, but very palatable to two hungry men. After eating from wooden bowls with huge wooden spoons we removed our outer garments and hung them up to dry and then proposed to curl up and sleep on the rough puncheon floor, wet though our underwear was. But I, as an honored guest, was furnished with a mattress and pillow as well as blankets. These attentions I would gladly have foregone, for sanitary reasons, but there was no escape, so I yielded to my fate and turned in.

Oh, *what* a night! We human beings were not alone in the cabin that night! From every crack and cranny there issued a ravening host, swarming over us like the Lilliputians on Gulliver. All night long I was engaged in a sanguinary conflict which ceased only when the rays of dawn dispersed the enemy.

Our hosts were up with the sun, and so was I, itching from a hundred wounds. We had scarcely eaten our breakfast of bear and squash when from every direction came Indians laden with things to sell. They brought dresses, moccasins, wooden bowls, medicine bags, a wampum necklace, a war bundle and all manner of other things. And now Mexico simply refused to interpret. He simply put his foot down and said he would not talk about the ignorant superstitions of these Indians, all of which were untrue, and to my intense disgust walked out of the house and left me flat. However, I noticed an immediate change for the better as soon as he was gone. The Indians quickly made me understand that they were glad of his absence, and by means of English, Menomini, Potawatomi, and Ojibway, horribly mixed in a wretched jargon, I was able to accomplish ten times as much as I could with Mexico for go-between. The wampum necklace, made of the long beads of the "Dutch" variety, I could not get, as an excessive valuation was placed on it. Of other Potawatomi objects I did obtain a store. They were interesting in being on the whole much cruder than similar specimens of Menomini manufacture, or even than those made by the prairie band of the same people, now domiciled in Kansas. Probably a much greater difference than has ever been realized exists between the forest and prairie bands of the Potawatomi. I for one am of the opinion that their culture is different enough to warrant the assumption that the two divisions were on the point of becoming separate tribes when the whites came into their country.

Laden with a good haul of specimens, Mexico and I returned. The day was cold and blustery and snow fell at intervals, but, on the whole, we travelled in greater comfort than we had the day before. I found Captain Satterlee waiting for us in camp, and was glad to let Benjamin off for a few days to follow his own pet devices. I did not discharge him, disgusted as I was, for I still believed him to have some influence left among certain of the Potawatomi.

Next day Captain Satterlee and I determined to go forth and conquer by ourselves, so, armed with our pipes and my good uncle's shotgun in case we should see a partridge, we set our feet in the trail and proceeded to call on one *Säpwätûk*, who, rumor said, had many sacred articles. It was a long tramp through the chilly, sunless woods, but there was no rain that day, so we fared well enough, but a surprise awaited us at Säpwätûk's. When we arrived we found the old man had hung some bundles of feathers on his medicine pole, which stood before his door, and was prepared to greet us. No sooner had we set foot in his clearing than he issued from his log cabin, fully attired in Indian dress, the upper part of his face painted with vermillion mixed with a medicine intended to overcome all our powers of resistance so far as refusing to accede to his prices for his goods were concerned. His long white locks waved in the breeze and in his hand he held a ferocious looking pipe tomahawk.

"Hullo boys! What do you want?" he barked by way of greeting.

Now Captain Satterlee and I both knew very well that he had heard we were in the neighborhood and we guessed from his medicine pole and red paint that he meant to overreach us in any bargaining. That he would have tried this on an ordinary white man I doubt, but all the Potawatomi at this time considered me a Menomini, as I was, by adoption, and would have no other explanation. The address and the paint irritated Captain Satterlee, who promptly advanced and with a threatening gesture drew himself to his full heighth, smote on his chest and announced, "I am Captain John Satterlee of the Indian police force, known as *Muskiwinines,* the Little Medicine man, stepson of *Musákwût,* grandson of *Apa'somin* the Acorn, and great grandson of *Wabomin,* the White Corn, on my stepfather's side, and *Miâkesik* the True Sky was my mother's grandfather! These were men, and their names made the enemy tremble. This is my nephew, Little Weasel, who is also the nephew of Sabatis Perrote, and of great ancestry. Who are you, Potawatomi, to question us?"

Now the Menomini, at least, are very keen on genealogies, and I presume so are the Potawatomi also. I do not remember at the moment whether I have Satterlee's ancestry correct as he uttered it, but his speech made a great and visible impression on

Säpwätûk, who retired crestfallen and precipitate, apparently not having any repertoire at hand for a reply.

"The darned old cuss!" said Uncle John, who is not given to violent language, "tried to work his dirty red medicine on us, eh? Well, I told him who we were. I fixed him! I spoke up as I should have done if we had been captured by the Sauk and they were going to burn us at the stake!"

In a few moments Säpwätûk again appeared. His red paint had been scrubbed off and his warlike attire discarded. He was the picture of humility as he invited us to enter.

Suffice to say that the old Potawatomi did not prove so difficult to negotiate with after all. We bought his tomahawk pipe and many other things and he showed us a huge colored poster advertising the cowboy fair at Cheyenne, Wyoming, which he had somehow acquired. "*Mätc mokoman okémán,* Theodore Roosevelt" (great American chief, Theodore Roosevelt) he confided to me, pointing out the lively picture of a bronco buster astride a bucking horse. This was a point of contact for us, for I too admired the late colonel, and we smoked and chatted for hours.

As we were leaving, Captain Satterlee noticed some skinned carcasses of muskrats hanging in an out building and begged one of Säpwätûk. This he gave us, but advised us not to eat it, for muskrat soup, said he, was only meant for old folks, and if he ate this one we would be aged before our time. I may say, however, that we did eat muskrat soup that night and the only result which followed was the satisfying of our hunger.

After another bitter night in camp, during which Satterlee and I took the lighted lantern under our covers to keep us warm, we set out for Wabeno and there took the train home to Keshena. Of course once we were where we could have shelter and comfort, a beautiful warm Indian summer set in, too late to benefit us.

As for Benjamin Mexico, he never again had any standing with me. Several times I attempted to employ him on small jobs, but found him stupid and utterly worthless. Once he came to Captain Satterlee and told him that he had found an entire Indian clay jar on the shore of Keshena Lake, when dig-

ging for medicinal roots, but had chopped it up with his hoe, just for fun.

When I was at Keshena in 1919, I learned from the Menomini that Benjamin had died on one of his periodical trips up into the Potawatomi forests, somewhere near Wabeno.

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